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GREENLAWNS HIGH SCHOOL
TERMINAL EXAMINATION 2017-18

SUB : CHEMISTRY
TIME : 2 HOURS

CLASS : IX
MARKS : 80

You will not be allowed to write during the first 10 minutes. This time is to be spent in reading the question paper.

Answers to this paper must be written on the paper provided separately.

Section I is compulsory section.

Section II has 5 question solve any 4.

SECTION I

Question 1.

a) Name the following

[10]

- i) Large scale preparation of ammonia.
- ii) Substances that lose water on exposure to air.
- iii) Density of water at 4°C.
- iv) Boiling point of liquid nitrogen.
- v) A positively charged ion.
- vi) Atoms having same atomic number but different mass number
- vii) Type of bond formed in nitrogen molecule.
- viii) An example of neutral oxide.
- ix) Type of compound formed when Calcium dissolves in cold water
- x) Formula of water gas.

b) Balance the following equation

[5]

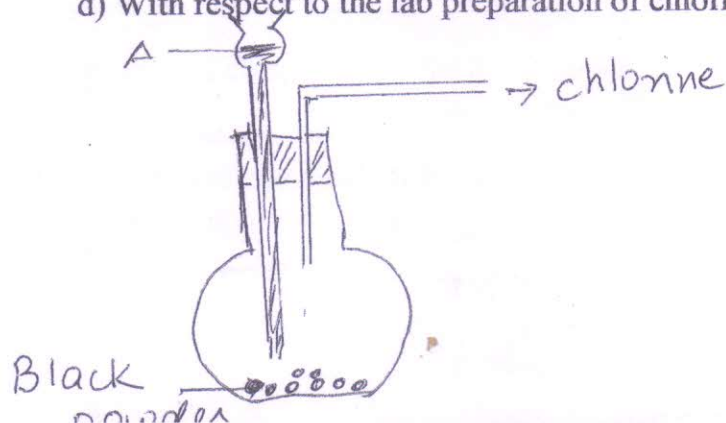
- i) $S + HNO_3 \longrightarrow H_2SO_4 + H_2O + NO_2$
- ii) $Cu + HNO_3 \longrightarrow Cu(NO_3)_2 + NO_2 + H_2O$
- iii) $P + O_2 \longrightarrow P_2O_5$
- iv) $Fe_3O_4 + H_2 \longrightarrow Fe + H_2O$
- v) $Al + H_2O \longrightarrow Al_2O_3 + H_2$

c) Define the following terms.

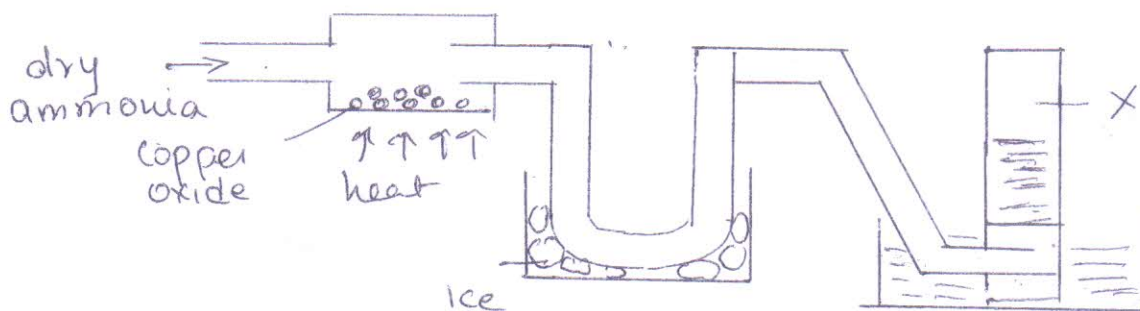
[5]

- i) Isotopes
- ii) Eutrophication
- iii) Deliquescence
- iv) Unsaturated Solution
- v) BOD

d) With respect to the lab preparation of chlorine. Answer the question that follow. [5]



- i) Give an equation for the above reaction.
 - ii) What is the role of A?
 - iii) How is the gas dried?
 - iv) How would the gas be collected? Why?
 - v) Give an equation to test the gas.
 - vi) Give an equation to show the reaction between chlorine and excess ammonia.
- e) What do you observe when [5]
- i) Sodium is placed in cold water
 - ii) Chlorine gas is bubbled through water in sunlight.
 - iii) Carbon dioxide is bubbled through water
 - iv) Quicklime is added to water.
 - v) Ammonium dichromate is heated.
- f) Give the effect of the following in water. [5]
- i) Lead
 - ii) Mercury
 - iii) Oil
 - iv) Sulphuric acid
 - v) Hot water
- g) i) Give an equation for the above reaction. [5]



- ii) What observation would you notice ?
- iii) How would you test ,
- iv) Which property of ammonia is depicted ?
- v) List 2 Importance of N₂.

SECTION - II

Solve any 4 from the given 5 questions.

Question 2.

- a) How would you differentiate between the following give a chemical test. [3]
- Sodium sulphite / sodium carbonate.
 - Copper nitrate / Lead nitrate
 - Carbon monoxide/ Carbon dioxide
- b) A_q^{18} and B_{19}^{37} one atoms of elements [5]
- Give the electronic configuration of A and B.
 - Write the formula of the compound formed between B and oxygen.
 - Draw the atomic structure between A and hydrogen
 - Draw the electron dot diagram of the compound between B and A
 - Name the bond between A and B
- c) Give equation to show how nitrogen gets converted to acid rain in the atmosphere. [2]

Question 3.

- a) Give reasons for the following statements. [5]
- Electrovalent compounds conduct electricity but not covalent
 - Chlorine is not used to bleach silk.
 - Nitrogen is not obtained by heating ammonium nitrite directly.
 - Cations are smaller than its corresponding atom.
 - Atoms have no charge.
- b) Give 1 difference between. [5]
- Electrovalent/ covalent compound (on the basis of density)
 - Acidic oxide/Basic oxide (action on litmus)
 - Atom/ion (definition)
 - Carbon dioxide/ ammonia (litmus test)
 - Supersaturated/ unsaturated solution (definition)

Question 4.

- a) Lead oxide is an amphoteric oxide. Justify with the help of equation. [3]
Define an amphoteric oxide
- b) Give a chemical test for the following gases. [4]
- Carbon dioxide
 - Hydrogen sulphide
 - Sulphur dioxide
 - Hydrogen

- c) i) Draw an electron dot diagram to show the structure of water. [3]
ii) Write the type of covalent bond.

Question 5.

- a) Write equations for the [5]
i) Action of chlorine and cold, dilute sodium hydroxide
ii) Nitrogen and ammonia
iii) Red hot iron + water.
iv) Potassium permanganate + conc. Hydrochloric acid
v) Ammonia and oxygen.

- b) How would you convert [3]
i) Acidic gas \longrightarrow acid
ii) Metal \longrightarrow alkali
iii) Basic gas \longrightarrow neutral gas

- c) Draw the atomic structure of calcium oxide. [2]

Question 6.

- a) With respect to the preparation of nitrogen, answer the questions that follow [5]
using ammonium chloride.
i) Write an equation
ii) How is the gas collected? Why?
iii) Give an equation to test nitrogen.
iv) Give an equation to show the reaction between nitrogen.
v) Give 2 physical properties of Nitrogen.
- b) Give the chemical formula for the following [3]
i) Bleaching powder
ii) Glauber's salt
iii) Green vitriol
iv) Epsom salt
v) Washing soda
vi) Litharge

- c) Draw the electron dot diagram of carbon dioxide. [2]