

GREENLAWNS HIGH SCHOOL

TERMINAL EXAMINATION 2020

CHEMISTRY

STD.: X

MARKS: 60

TIME: 2 HOURS.

Question 1

Name the following:

[10]

- i) The largest atom in the 3rd period.
- ii) A compound which is a drying and dehydrating agent.
- iii) A metal in period 3 having 3 electrons in the last shell.
- iv) Type of bond between alkali metal and halogen.
- v) A yellow monoxide which dissolves in caustic alkali.
- vi) Method of concentration of sulphide ores.
- vii) Compound formed when nitric acid reacts with the protein of the skin.
- viii) Common name for nitric acid.
- ix) Acid used in eye wash.
- x) Compound used for electroplating of silver.

Question 2

a) What would you observe when

[5]

- i) ammonium hydroxide is added to copper sulphate solution first a few drops then in excess.
- ii) concentrated nitric acid is poured over turpentine.
- iii) Barium chloride is added to sulphuric acid.
- iv) Lead nitrate is treated with sulphuric acid.
- v) Zinc granules are added to copper sulphate solutions.

b) Give a reason for the following:

[5]

- i) Acetic acid is a monobasic acid.
- ii) Solution of sodium chloride can conduct electricity but not carbon tetra chloride.
- iii) reduction of aluminium oxide is very difficult.
- iv) Concentrated sulphuric acid is stored in air tight bottles.
- v) Lead acetate paper turns blue black when dipped in a gas jar containing hydrogen sulphide.

Question 3

- a) Answer the questions that follow regarding the periodic table. [5]
- What are halogens?
 - List them in increasing order of their electro negativity.
 - What are bridge elements? Give an example.
 - Give 2 differences between halogens and alkali metal.
- b) With respect to extraction of aluminium, answer the following questions:
- Give equations to show the conversion of bauxite into alumina.
 - Name the process.
 - Why is caustic alkali added to the powdered ore?
 - Give equations for the electrolysis of the electrolyte in hall heroullts process
 - Name 2 ores of aluminium apart from bauxite [5]

Question 4

- a) With respect to electrolysis of copper sulphate solution using Platinum electrodes answer the questions that follow: [5]
- Write an equation to show the dissociation of copper sulphate solution.
 - Give equations to show the reactions taking place at the anode and at the cathode.
 - List 3 changes observed during the reaction.
- b) Give a chemical test (only observations to differentiate between the following) [5]
- Sulphur dioxide and Carbon dioxide.
 - Lead nitrate and Zinc nitrate.
 - Ferrous sulphate and Ferric chloride.
 - Sodium hydroxide and Ammonium hydroxide.
 - Dilute and concentrated hydrochloric acid.

Question 5

- a) Draw the electron dot diagram of ammonium ion. [2]
- b) Give equations to carry out the following conversions. [3]
- A non metal to an oxy acid.
 - An oxide to a non volatile acid.
 - A non volatile acid to a volatile acid.
- c) Write equations for the following reactions: [5]
- Heating of ammonium nitrate.
 - reaction between zinc and caustic soda.
 - reaction between copper and concentrated nitric acid.
 - Sodium thiosulphate and dilute hydrochloric acid.
 - ammonia and excess chlorine.

Question 6

a) Using sulphuric acid, give equations to prepare:

[6]

i) A black spongy mass.

ii) A carbon dioxide.

iii) A carbon monoxide.

iv) Ethene.

v) Hydrogen sulphide.

vi) Hydrogen chloride.

(Remember to mention the property sulphuric acid exhibits in each case).

b) With respect to the laboratory preparation of ammonia, answer the questions that follow.

[4]

i) Give an equation for the same.

ii) How is the gas collected? Why?

iii) Give a chemical test for ammonia.

iv) Give the catalytic reaction in Ostwald's process.

GREENLAWNS HIGH SCHOOL

CHEMISTRY TEST

STD: 10

MARKS: 15

TIME: 30 MINUTES

Qs 1 Give the common name for hydrochloric acid. [1]

Qs 2 What is the V.D. of hydrogen chloride? [1]

Qs With respect to lab preparation of hydrogen chloride, answer the following questions. [5]

a) Give an equation for the reaction.

b) Why are these reactants used?

c) How is the gas collected? Why?

d) Give a chemical test for the gas.

Qs4 What is the aim of the fountain experiment with respect to hydrogen chloride? [1]

Qs5 $\text{Na}_2\text{SO}_3 + \text{HCl} \longrightarrow$ [1]

Qs 6 $\text{Ca}(\text{HCO})_3 + \text{HCl} \longrightarrow$ [1]

Qs 7 What would you observe if hydrochloric acid is added to manganese dioxide? [1]

Qs8 Give equation and observation to differentiate between dilute and concentrated hydrochloric acid. [2]

Qs9 What is aqua regia? With the help of equations give its importance. [2]

GREENLAWNS HIGH SCHOOL
CHEMISTRY PRACTICAL EXAM

STD 10

MARKS: 15

Time: 1 Hour.

QUESTION 1

Observe the video 3 where a blue crystalline salt is heated as shown to you.

Answer the questions given below: [5]

- a) Write 3 observations.
- b) Identify the gas produced.
- c) Write an equation for the above reaction.

QUESTION 2

Observe video 2 shown to you where a sulphite is treated with a dilute acid and answer the questions that below: [5]

- a) Write 3 chemical tests you would observe when the reactants are heated.
- b) Identify the gas produced.
- c) Give an equation for the reaction.

QUESTION 3

Observe video 1 where a carbonate is treated with a dilute acid and answer the questions that below: [5]

- a) Write three tests for the gas produced.
- b) Identify the gas produced.
- c) Give an equation for the same.

GREENLAWNS HIGH SCHOOL

CHEMISTRY TEST

STD: 10

MARKS: 20

TIME: 30 MINUTES

CHEMISTRY TEST NUMERICALS

- 1) Find the percentage of water in $\text{Na}_2\text{SO}_4 \cdot 10\text{H}_2\text{O}$.
(Na=23, S=16, H=1, O=16)
- 2) A compound has C=26.7%, O=71.1%, H=2.2%. Find the E.F. If the R.M.M. is 90, find the M.F. (C=12, H=1, O=16).
- 3) A hydrocarbon contains 17.2% hydrogen. If the V.D.=29, calculate its M.F.
- 4) Find the E.F. of glucose $\text{C}_6\text{H}_{12}\text{O}_6$.

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CHEMISTRY TEST

STD: 10

MARKS: 10

TIME: 20 MINUTES

BALANCING

- 1) $\text{MnO}_2 + \text{HCl} \longrightarrow \text{MnCl}_2 + \text{Cl}_2 + \text{H}_2\text{O}$
- 2) $\text{KNO}_3 \longrightarrow \text{KNO}_2 + \text{O}_2$
- 3) $\text{S} + \text{HNO}_3 \longrightarrow \text{H}_2\text{SO}_4 + \text{NO}_2 + \text{H}_2\text{O}$
- 4) $\text{NH}_3 + \text{Cl}_2 \longrightarrow \text{NCl}_3 + \text{HCl}$
- 5) $\text{C}_2\text{H}_6 + \text{O}_2 \longrightarrow \text{CO}_2 + \text{H}_2\text{O}$
- 6) $\text{Pb}_3\text{O}_4 + \text{HCl} \longrightarrow \text{PbCl}_2 + \text{Cl}_2 + \text{H}_2\text{O}$
- 7) $\text{Cu}(\text{NO}_3)_2 \longrightarrow \text{CuO} + \text{NO}_2 + \text{O}_2$
- 8) $\text{NH}_3 + \text{O}_2 \longrightarrow \text{NO} + \text{H}_2\text{O}$
- 9) $\text{FeS}_2 + \text{O}_2 \longrightarrow \text{Fe}_2\text{O}_3 + \text{SO}_2$
- 10) $\text{K}_2\text{Cr}_2\text{O}_7 + \text{HCl} \longrightarrow \text{KCl} + \text{CrCl}_3 + \text{H}_2\text{O} + \text{Cl}_2$