

GREENLAWNS HIGH SCHOOL
TERMINAL EXAMINATION YEAR 2019-20

SUBJECT : CHEMISTRY
TIME : 2 HOURS

CLASS : IX
MARKS : 80

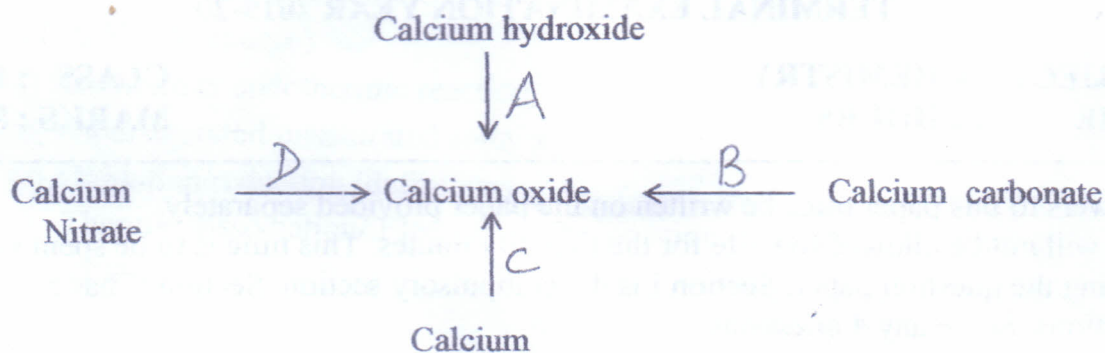
Answers to this paper must be written on the paper provided separately.
You will not be allowed to write for the first 10 minutes. This time is to be spent in reading the question paper. Section I is the compulsory section. Section II has 5 questions. Solve any 4 questions.

SECTION – I (40 marks)

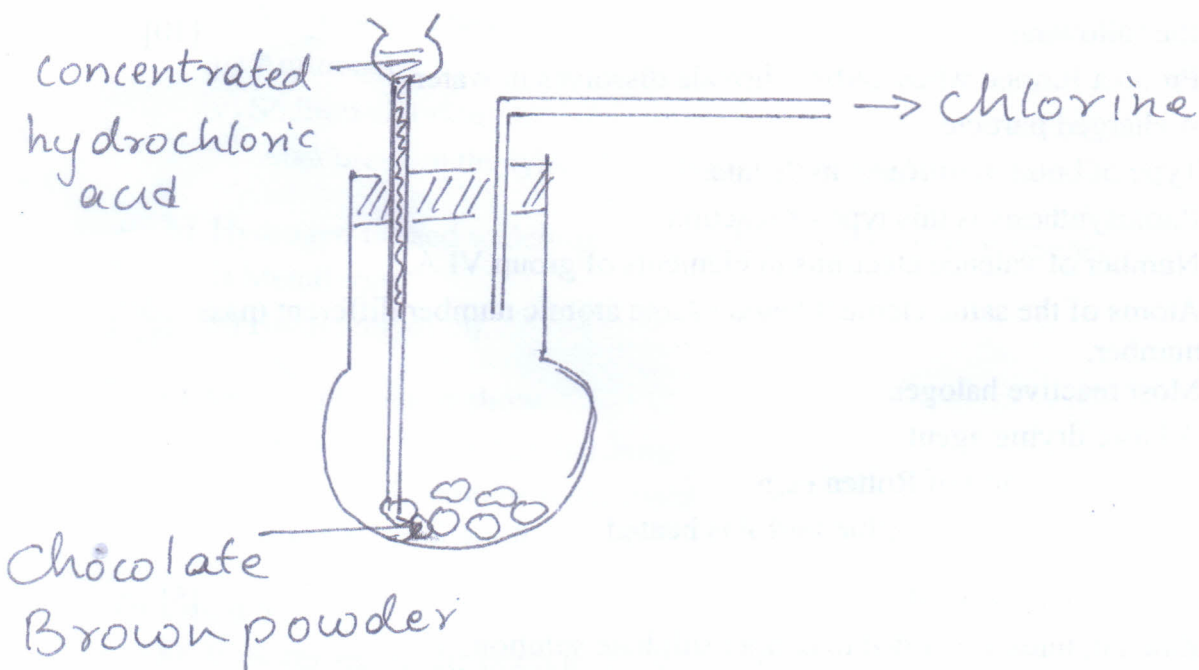
Question 1

- a) Name the following [10]
- i) Product formed when carbon dioxide dissolves in water.
 - ii) A charged particle
 - iii) Type of bond in nitrogen molecule.
 - iv) Photosynthesis is this type of reaction.
 - v) Number of valence electrons in elements of group VI A.
 - vi) Atoms of the same element having same atomic number different mass number.
 - vii) Most reactive halogen.
 - viii) A basic drying agent.
 - ix) Gas with a smell of Rotten eggs.
 - x) Colour change when Blue vitriol is heated.
- b) What would you observe if. [5]
- i) Zinc granules are added to copper sulphate solution.
 - ii) A fresh red flower is placed in a jar containing chlorine
 - iii) Copper carbonate is heated
 - iv) Chlorine gas is bubbled through potassium iodide solution
 - v) A piece of sodium is placed in a trough containing cold water.
- c) Give a chemical test to differentiate between. [6]
- i) Sulphur dioxide and Hydrogen sulphide.
 - ii) Carbon dioxide and sulphur dioxide.
 - iii) Ammonia and hydrogen chloride.
- d) With respect to the laboratory preparation of hydrogen, answer the questions [5] that follow.
- i) Give an equation for the process?
 - ii) How is the gas collected? Why?
 - iii) Give a test for the gas
 - iv) Name the impurities present (any 3)
 - v) Explain how you would remove the impurities mentioned in (iv)

e) Write equations to show the following conversions. [4]



f) With respect to the set-up shown below, answer the questions that follow. [4]



- i) Write an equation for the above reaction
- ii) How is the gas collected? Why?
- iii) Give an equation for a chemical test of the gas produced.
- iv) What is the role of B in the reaction?

i) Find the R.M.M. of the following. [2]

- i) Ammonia
- ii) Sulphuric acid, $(N_7^{14} H_1 \quad S_{16}^{32} O_8^{16})$

j) Give reason [4]

- i) Aluminium oxide cannot be reduced using carbon
- ii) Hydrogen ion is a proton
- iii) Dobereiner law was discarded.
- iv) Chlorine is not used to bleach silk.

SECTION – II
Solve any 4 questions.

Question 2

[5]

a) Define

- i) Saturated solution
- ii) Bridge elements
- iii) Hygroscopic elements
- iv) Transition elements
- v) Neutral oxides

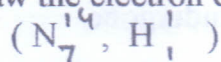
b) Give complete balanced equations to show preparation of hydrogen.

[3]

- i) Caustic alkali
- ii) Cold water
- iii) Steam

c) i) Draw the electron dot diagram of ammonia

[2]



ii) Is ammonia an element or compound? Give a reason for your answer.

Question 3.

a) With respect to the large scale production of hydrogen.

[3 ½]

- i) Give the name of the process.
- ii) Give equations for the process.
- iii) Give equations to show how the impurities produced in this process are removed.

b) X_{11}^{23} and Y_9^{19} are atoms of elements.

[4 ½]

- i) Write their electronic configuration.
- ii) Which period do X and Y belong?
- iii) To which group do X and Y belong?
- iv) Write the formula of the compound formed when X and Y react.
- v) Draw the atomic structure of the compound formed.
- vi) What type of a bond does the compound have?

c) Lead oxide is an amphoteric oxide. Justify with the help of equations.

[2]

Question 4.

a) Using chlorine give equations for the preparation of the following compounds.

[3]

- i) an oily explosive liquid.
- ii) a white crystalline sublimable solid.
- iii) A gas which relights a glowing splint.

b) i) Give formula of the following

[2]

- i) Washing soda
- ii) Glauber's salt

- c) Give 1 difference between the following pairs. [5]
- I A/ VII A (charge)
 - Exothermic/ endothermic reaction
 - Supersaturated/unsaturated solution
 - Oxidation/reduction (definition)
 - Thermal dissociation/ Electrolytic dissociation (example in the form of an equation)

Question 5.

- a) Give an equation for the preparation of the following [6]
- Lead carbonate
 - Magnesium chloride
 - Ammonia
 - Sodium chloride

Also mention the type of chemical reaction it has undergone.

- b) Hydrogen is used widely in many fields. Explain with reference to [2]
- Metallurgy
 - Hardening of oil.

- c) Give equations to show. [2]
- removal of temporary hardness
 - removal of permanent hardness in water using washing soda

Question 6.

- a) With respect to the periodic table. [5]
- Name elements of period 2
 - What periodic property change would you observe in size as you move down a group? Why?
 - What are lanthanides.
 - Why are elements of group IA known as alkali metals?

- b) Give equations for the following reactions. [5]
- Heating of copper nitrate
 - Reaction between concentrated Hydrochloric acid and Potassium Permanganate.
 - Hydrogen and nitrogen
 - Chlorine and cold dilute sodium hydroxide
 - Red hot iron and steam