GREENLAWNS HIGH SCHOOL
CHEMISTRY EXAMINATION

STD 9C
40 MARKS

You will not be allowed to write for the first 10 minutes
This time is to be spent in reading the question paper
All questions are compulsory

QUESTION 1

Name the following (5)

a) Compound formed when magnesium reacts with steam

b) 1st element of period 2

c) Radioactive element of group 1A

d) Number of electrons in the last orbit of chlorine

e) Number of elements in period 3

QUESTION 2

Define the following (5)

a) Isotopes
b) Deliquescence
c) Dehydrating agent
d) Dobereiners Law
e) Boyle's Law

B) Identify the type of reaction (5)

i) $Na + H_2O \longrightarrow 2\,NaOH + H_2$

II) $Na_2CO_3 + Ca(NO3)_2 \longrightarrow 2\,NaNO_3 + CaCO_3$

III) $NaOH + HCl \longrightarrow NaCl + H_2O$

iv) $2SO_2 + O_2 \longrightarrow 2SO_3$

v) $Ca(NO_3)_2$ when heated $\longrightarrow CaO + 4NO_2 + O_2$

QUESTION 3 (5)

A) What would you observe when

a) Calcium is placed in a jar of cold water

b) Lead nitrate is heated

c) Dilute hydrochloric acid is added to copper carbonate

B) X_2SO_4 is a compound .Give the formula of the

a) chloride of X

b) oxide of X

QUESTION 4 (5)

a) The volume of a fixed mass of dry gas is 500cc at a pressure of 190 mm of Hg. If the temperature remains constant ,find the volume of the gas at 3800mm of Hg

b) The volume of a gas is 600ml at a temperature of -73*C. If the pressure remains constant find the temperature at which the volume becomes double

QUESTION 5 (5)

Study the periodic table below and answer the questions that follow

Group No	1 – I A	2 – II A	13 – III A	14 – IV A	15 – V A	16 – VI A	17 – VII A	18 - 0
2 nd period	Li		D			O	J	Ne
3rd period	A	Mg	E	Si		H	M	
4th period	R	T	I		Q	u		y

In the above table – H does not represent hydrogen. Some elements are in their own symbol & position in the periodic table while others are shown with a letter. Identify:

i) The most electronegative element.

ii) The most reactive element of group I.

iii) The element from period 3 with least atomic size.

iv) The noble gas of the fourth period.

v) How many valence electrons are present in Q.

vi) In the compound between A & H what type of bond is formed & give its molecular formula.

QUESTION 6

A) Give equations for the following reactions (5)

a) Action of sodium and cold water

b) Carbon dioxide and water

B) Give one difference between

a) IA and VIIA (on basis of electrons in last orbit)

b) Temporary hard water and permanent hard water (salt present)

c) Electrovalent compound and covalent compound (state)

QUESTION 7 (5)

Draw the electron dot diagram of the following

a) Carbon dioxide
b) Carbon tetrachloride

$_{6}C^{12}$, $_{8}O^{16}$. $_{17}Cl^{35}$

QUESTION 8 (5)

A) Give reasons for the following

a) Valency of elements of group IIIA is +3

b) Elements of group IA are known as alkali metals

c) Elements of group 18 have valency 0

B) Find the percentage of aluminium in aluminium hydroxide (Al=27,O=16,H=1)