GREENLAWNS SCHOOL, WORLI
TERMINAL EXAMINATION: 2019-20
CHEMISTRY

Std: VIII   Marks: 80

Date: 27/09/2019   Time: 2 hrs

Answer to this paper must be written on the answer booklet provided to you.

The first 10 minutes are to be spent in reading the Question paper. The time given at the head of this paper is the time allowed for writing the answers. All questions are compulsory.

Do not waste paper. Leave only one line after each answer.

I A) Name the following: [5]
  i. The state of matter with very weak inter-particle attraction between the atoms.
  ii. A gas which turns starch iodide paper blue black.
  iii. Rays which led to the discovery of electrons.
  iv. Technique used to separate two miscible liquids.
  v. A pure substance made up of one kind of atoms only.

B) Match the atomic numbers 10, 14, 8, 15 and 19 with each of the following: [5]
  i. A solid non-metal of valency 3.
  ii. An inert gas element.
  iii. A metal with one electron in N shell.
  iv. A non-metal of valency 4.
  v. An element with 6 electrons in valence shell.

C) Give one point of difference between the following: [5]
  i. Ion and radical
  ii. Vaporization and liquefaction
  iii. Relative atomic mass and relative molecular mass
  iv. Medical use of carbon dioxide and oxygen
  v. Metallic and non-metallic elements

D) Balance the following chemical equations: [5]
  i. $Fe_2O_3 + CO \rightarrow Fe + CO_2$
  ii. $MnO_2 + HCl \rightarrow MnCl_2 + H_2O + Cl_2$
  iii. $Mg_3N_2 + H_2O \rightarrow Mg(OH)_2 + NH_3$
  iv. $NH_3 + CuO \rightarrow Cu + H_2O + N_2$
  v. $Fe + H_2O \rightarrow Fe_3O_4 + H_2$

E) Define the following terms: [5]
  i. Valency   iii. Mixtures   v. Ionic bond
  ii. Atomic mass number   iv. Law of conservation of mass

F) Give reasons for the following: [5]
i. On heating a sublimable solid the inter-particle attraction is overcome.
ii. Existence of isotopes contradicts Dalton's atomic theory.
iii. All chemical equations must be balanced.
iv. The molecular formula of sodium oxide is Na_2O and not NaO.
v. Burning of sulphur powder is a chemical change.

G) State which type of mixture A to E are generally separated using the methods 1 to 10. [5]

A. Two solids	B. A solid and a liquid	C. Two liquids
D. A liquid and a gas	E. Two gases	

1. Solvent extraction
2. Sedimentation
3. Boiling
4. Fractional distillation
5. Fractional crystallisation
6. Evaporation
7. Diffusion
8. Sublimation
9. Distillation
10. Use of separating funnel

H) Write molecular formula of the following compounds: [5]
i. Ammonium sulphate
ii. Sodium dichromate
iii. Iron [II] oxide
iv. Magnesium phosphate
v. Aluminium zincate

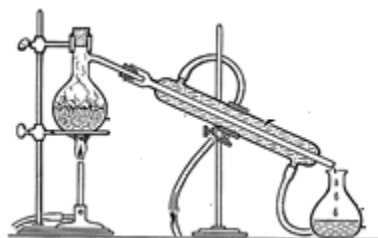II A) Explain the term Compounds. [1]
i. Name three compounds containing zinc with their formula. [3]
ii. Give two differences between elements and compounds. [2]
iii. State why water is a compound? [2]
B) Draw atomic orbital diagram of Sulphur (A=32) giving necessary information. [2]

III A) Given below are two methods of separation of mixtures.


1   2

i. Identify the above two methods. [1]
ii. State the principle used in the two techniques. [2]
iii. Give an example of each mixture separated by these two methods. [2]

B) Mention one chemical test for each of the following gas: [2]
   i. Hydrogen sulphide   ii. Sulphur dioxide

C) Give one use of each of the following gas: [2]
   i. Nitrogen   ii. Hydrogen

D) What is the principle of Chromatography?   [1]

IV A) Explain Modern Atomic Theory.   [3]

B) Draw atomic orbital diagram to show the formation of Oxygen molecule.   [2]

C) What did Rutherford conclude from his experiment on discovery of atomic nucleus?   [2]

D) Draw a neat labelled diagram of interconversion of states of matter.   [3]

V A) Balance the following word equations: [4]
   i. Calcium bicarbonate + Nitric acid → Calcium nitrate + Water + Carbon dioxide
   ii. Magnesium + Carbon dioxide → Magnesium oxide + Carbon

B) The figure below depicts discovery of a sub-atomic particle. Observe and answer the questions:

Discharge tube
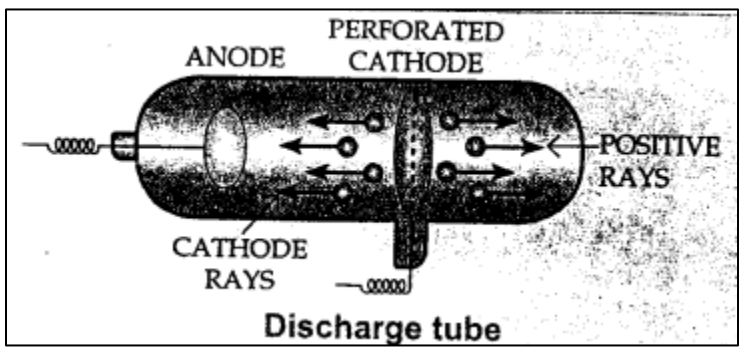
   i. Name the sub-atomic particle being discovered.   [½]
   ii. Which scientist discovered the sub-atomic particle mentioned by you above?   [½]
   iii. What is the charge and mass of this sub-atomic particle?   [1]

C) Describe Physical Change.   [2]

D) Copy and complete the following table: [2]

Metal / Non-metal	Ion	Nearest Noble gas
Mg – 2e⁻ →		
Cl + 1e⁻ →		

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