Annual Examinations –2017-2018
Chemistry
Class IX

Time: 2 Hrs. **M.M: 80**

SECTION –A
(Attempt all questions)

1) Fill in the blanks: 5
a) The temperature on the Kelvin scale at which molecular motion completely ceases is called……
b) If temperature is reduced to half …… would also reduce to half.
c) The melting point of ice is …… Kelvin.
d) Symbols represent …… atom(s) of an element.
e) A chemical change is …… change.

2) State which of the following statements are true and which are false: 5
a) All substances have the highest density in the gaseous state.
b) Different amounts of a gas may be made to occupy the same container.
c) A molecule of an element is always diatomic.
d) A balanced equation obeys the law of conservation of mass.
e) Curdling of milk is a physical change.

3) Answer the following questions in one or two words: 5
a) Name the elements present in the first period
b) The reaction between hydrogen and chlorine to form hydrogen chloride.
c) The number of carbon atoms in a carbonate radical
d) The name given to the elements of VII A group
e) An element with valency 3

4) Give the correct molecular formula of the following compounds: 10
a) Sodium Sulphate
b) Ammonium Hydroxide
c) Copper Carbonate
d) Ferric Chloride
e) Calcium Nitrate
f) Potassium oxide
g) Hydrogen sulphate
h) Ferrous Sulphate
i) Lead Chloride
j) Hydrogen Chloride

5) Give the symbols of the following radicals: 5
a) Bicarbonate
b) nitrite
c) Phosphate
d) Acetate
e) Chlorate

6) Write the chemical equations of the following reactions and balance them: 10
a) Sodium hydroxide + sulphuric acid →sodium sulphate + water
b) Iron + sulphuric acid → ferrous sulphate + hydrogen
c) Barium chloride + sodium sulphate → barium sulphate + sodium chloride
d) carbon dioxide→ hydrogen carbonate
e) Zinc sulphate + oxygen → zinc oxide + sulphur dioxide

SECTION – B

(Attempt any four questions) 10x4=40)

1. a) Define Charle's law. Derive its equation. 4
b) 20 ml of hydrogen gas at 15^0C is heated to 35^0C at constant pressure.
Find the new volume of hydrogen. 21.3 4
c) Define STP or NTP. Give its values. 2

2. a) Define absolute zero and absolute scale of temperature.
Write the relationship between ^{0}C and K. 3
b) Derive the gas equation. 3
c) A gas occupies 7.6L at 270C and 800mm Hg. What will be its volume at stp? 4.02. 4

3. a) Define: 2
i. variable valency
ii. radical
b) Give four information conveyed by a balanced chemical equation. 4
c) Find the molecular mass of the following compounds: 4
i. K_2SO_4 174
ii. $CaCl_2$ [K=39, O=16, S=32, Ca=40, Cl=35.5] 111.0

4. Define the following and give one example: 10
i. Neutralisation reaction
ii. Oxidation reaction
iii. Synthesis reaction
iv. Simple displacement reaction
v. Double decomposition reaction

5. a) Define Mendeleev's Periodic Table. State three defects of the table. 4
b) How did Mosely remove some defects of the Mendeleevs Periodic Table 4
c) What is Diagonal relationship? Explain by giving examples. 2