

# *City International School*

## FIRST TERMINAL EXAMINATION – 2015 - 2016

Date : 11/08/2015

Marks : 40

Std : IX

Subject : Chemistry (Paper II)

Time : 1hr

You will not be allowed to write during the first 15 minutes.

This time is to be spent in reading the question paper, the time given at the head of this paper is the time allowed for writing the answer.

Section A is compulsory. Attempt any three questions from section B.

The intended marks for questions or parts of questions are given in brackets ( )

### SECTION A [20 MARKS]

**Attempt all questions from this section.**

#### Question 1

- a. Complete the following table as per the atomic structure. (4)

Element Name	Atomic Number	Mass Number	No. of Neutrons	No. of Electrons
Phosphorous		31	16	
Fluorine	9		10	

- b. State Charle's Law. (2)

- c. Explain why? (4)

- i. On heating a sublimable solid, the inter – particle attraction is overcome.
- ii. Gases unlike solids and liquids exert pressure in all directions.

- d. Write the molecular formula of the following compounds. (4)

- i. Lead acetate
- ii. Ammonium chloride
- iii. Copper carbonate
- iv. Silver nitrate

- e. Balance the following equations. (5)

- i.  $\text{PbO} + \text{NH}_3 \longrightarrow \text{Pb} + \text{H}_2\text{O} + \text{N}_2$
- ii.  $\text{K} + \text{H}_2\text{O} \longrightarrow \text{KOH} + \text{H}_2 \uparrow$
- iii.  $\text{N}_2 + \text{H}_2 \rightleftharpoons \text{NH}_3$
- iv.  $\text{CO}_2 + \text{H}_2\text{O} \longrightarrow \text{C}_6\text{H}_{12}\text{O}_6 + \text{H}_2\text{O} + \text{O}_2$
- v.  $\text{P} + \text{O}_2 \longrightarrow \text{P}_2\text{O}_5$

- f. Name a substance which sublimes in absence of heat. (1)

## SECTION B [20 MARKS]

Attempt any three questions from this section.

### Question 2

- a. 600 ml of gas X is collected at 30°C. If for a particular use, the volume has to be reduced to  $\frac{1}{3}$  of its original volume, find the temperature to which the gas has to be cooled? (Pressure constant) (4)
- b. Differentiate between liquids and gases based on. (3)
- Inter – particle space
  - Inter – particle attraction
  - Kinetic energy
- c. Write down the electronic configuration of the following. (3)
- ${}_{13}^{27}\text{X}$
  - ${}_{17}^{35}\text{Y}$
  - ${}_{4}^{9}\text{Z}$

### Question 3

- a. A gas X at 27°C is heated until its pressure doubles and volume triples from the original pressure and volume. If the original volume is 500 cc; Calculate the temperature to which it should be heated. (4)
- b. State. The Gas Equation and derive its mathematical formula. (4)
- c. State the valency of (2)
- Calcium
  - Iodide

### Question 4

- a. Calculate the pressure of a gas having volume 100 litres originally occupying 75dm<sup>3</sup> at 700mm pressure. (4)
- b. State the Law of Conservation of Mass. (2)
- c. A fixed mass of a gas has a volume of 750cc at -23°C and 800mm pressure. Calculate the pressure for which its volume will be 720cc. The temperature being -3°C. (4)