** Bhartiyam International School**

**Pre – Mid Term Assessment (2022-23)  
 Subject: CHEMISTRY (SET A)**

**Class: XI**

**Date: 03/08/2022 Max. Mark: 40  
Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Roll No: \_\_\_\_\_\_ Duration: 1 hr 30 min**

**General instructions:-**

* This question paper contain 3 sections.
* **SECTION A** consist of five questions carrying **1** mark each.
* **SECTION B** consist of five questions carrying **3** marks each.
* **SECTION C** consist of four questions carrying **5** marks each.

**SECTION- A**

Q.1- Calculate the wavelength of an electron moving with a velocity of 2.05 × 107 ms-1. 1

Q.2- Find out atomic number, mass number, number of electrons and neutrons in an element

20**X**40 1

Q.3- On the basis of quantum numbers, justify that the sixth period of the periodic table should have 32 elements. 1

Q.4-Arrange them in order of increasing radii.

N3-, O2-, F–, Na+, Mg2+, Al3+ 1

Q.5- State Heisenberg’s Uncertainty Principle.1

**SECTION- B**

Q.6- Which of the following pairs of elements would have a more negative electron gain enthalpy ?  
(i) O or F (ii) F or Cl 3

Q.7- Give the general characteristics of the long form of the Modern periodic table? 3

Q.8- Define the following-

(i) Azimuthal quantum number. (ii) Aufbau rule. (iii) Hund’s rule 3

Q.9- Write the electronic configuration of Mn4+ Fe3+ and Zn2+ mention the number of

unpaired electrons in each case. 3

Q.10- Arrange the electrons represented by the following sets of quantum numbers in decreasing order of energy.

1. n=4, l=0, m=0, s=+1/2 2. n=3, l=1, m=1, s=−1/2 3. n=3, l=2, m=0, s=+1/2 3

**SECTION- C**

Q.11- (i) What do you mean by mendeleev’s periodic law ?

(ii) How did Mendeleev arrange the elements? Explain.

(iii) Name the two elements whose existence and properties were predicted by Mendeleev though they did not exist then. 5

Q.12- Give the main features of p-block elements, write the symbols with atomic numbers of all the

p- block elements. 5

Q.13- Differentiate Orbit and orbital, Draw all the possible orbitals. 5

Q.14-Define ionization enthalpy and electron gain enthalpy, by taking suitable examples. 5