Class 10thChemistry Assignment-II

Chapter: Periodic Classification of elements

Q-1 X, Y and Z are the elements of a doberniers triad. If the atomic mass of X is 7and that of z is 39, what should be the atomic mass of Y?

Q-2 A and B are the two elements having similar properties which obey Newlands law of octaves. How many elements are there in between A and B?

Q-3 Why Na is greater in atomic size than Na+

Q-4 Why does ionization energy generally decrease going down a group or family?

Q-6 An element X (2,8,2) combines separately with NO^{3-} and $(SO4)^{2-}$, $(PO4)^{3-}$ radicals.Write the formulae of the three compounds so formed. To which group of the periodic table does the element 'X' belong? Will it form covalent or ionic compound? Why?

Q-7 The following table shows the position of six

elements A, B, C, D, E and F in the periodic table.

Using the above table answer the following questions :

(a) Which element will form only covalent compunds?

(b) Which element is a metal with valency 2?

(c) Which element is a non-metal with valency of 3?

(d) Out of D and E, which one has a bigger atomic radius and why?

(e) Write a common name for the family of elements C and F.

Q-8 The diagram below shows part of the Periodic Table

1	2	3	4	5	6	7	0
Na						Cl	Ar

The position of three elements in the Periodic Table is shown:

i Write the atomic numbers of the elements.

ii Give the electronic distribution of the elements

iii Using these three elements as examples, describe the trend in chemical properties across the third period of the Periodic Table.

Q-9 Using Mendeleev's periodic table answer the following :

(a) Write the formula of hydride and oxide of silicon

(b) Name the elements which is in

(i) II group and 4th period

(ii) VI group and 3rd period.

(c) Name the elements in group I which do not resemble with alkali metals

(d) In group VI why does Te with atomic mass 127.60 comes before I with atomic mass 126.90

Q 10. A metal M forms an oxide having the formula M2O3. It belongs to 3rd period in the modern periodic table. Write the atomic number and valency of the metal.

Q-11 State the modern periodic law

Q-12 which of the two elements A=2,8,1 B = 2,8,8,1 i s more electropositive

Q-13 How does the atomic size vary in going from

A) Left to right in a period   B) Top to Bottom in a group

Q-14 An element has atomic number 13. In which group and period it should be placed?

Q-15 How many periods and groups are there in the long from of P.T?

Q-16 Why does the size of the atoms progressively become smaller when we move from sodium (Na) to chlorine (cl) in the third period of the period table ?

Q-17 Give symbols for

A. A metal of group 2.   B. A metal of group 13.

C. Two non metals of group 16.   D. Most reactive non- metal of group 17.

Q-18 Explain Why-

1. All the elements of a group have similar chemical properties.

2. All the elements in a period have different chemical properties.

Q-19 The atomic number of an element X is 17. Predict -

A. Its valency.   B. Nature of the elements.   C. Whether it is metal or non – metal.

D. Name of the element. E. Relative size with respect to other members of its group.

Q-20 The three elements predicted by mendeleev from the gaps in his periodic table were known as eka-boron, eka- aluminum, eka- silicon. What names were given to these elements when they were discovered later on?

Q-11 The atomic numbers of Nitrogen, Oxygen and fluorine are 7, 8, and 9 respectively. Write the electronic configuration of each element and answer the following:

(a) Out of N, O and F which is most electronegative and which one is least electronegative?

(b) What is the number of valence electrons of F?

(c) What is the valency of each of N, O and F?