



Assignment

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Date: __ / __ / __

Name: _____

Max Marks: 25

Section- A (One Marks Each)

- 1 Is it possible for an atom of an element to have one electron, one proton and no neutron? If so, name the element.
- 2 Why do elements react with each other?
- 3 The mass number of an element X is 4 and its atomic number is 2. What is the valency of X?
- 4 The atomic numbers of calcium and argon are 20 and 18, respectively, while their mass numbers are the same, i.e. what is the name given to such a pair of elements?
- 5 The atomic number and mass number of sodium are 11 and 23, respectively. Calculate the number of neutrons in a sodium atom.

Section-B (Two Marks Each)

- 6 "In an atom, the number of protons is greater than the number of neutrons, which in turn is greater than the number of electron." do you agree with this statement? Justify your answer.
- 7 Will ^{35}Cl and ^{37}Cl have different valencies? Justify your answer.
- 8 Helium atom has 2 electrons in its valence shell, but its valency is not 2. Explain why.
- 9 Why is the mass of a proton nearly equal to the mass of a hydrogen atom?

Section-C (Three Marks Each)

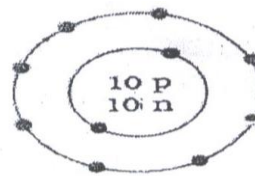
- 10 Give three applications of isotopes.
- 11 The atomic number of an element 'X' is twice the atomic number of carbon.
 - a) Which element is this? Write down the atomic number of X.
 - b) What is the valency of X?
 - c) Which type of ion will be formed by this element?
- 12 What will be the atomic number, mass number and valency of atoms X, Y and Z in the figure given below? Give your answer in a tabular form.



(X)



(Y)



(Z)

- 13 Why is atomic mass of chlorine not a whole number? Explain with relevant calculation.