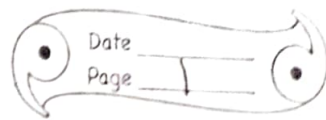


Hw  
3.10.21

Ch- 4

## Home Assignment



1. i) Atoms are smallest units of an element.
- 2) Metals have variable valency.
- 3) The number of atoms present in a molecule of an element is called as atomicity.
- 4) The combining capacity of an element is known as valency.
- 5) Carbon is the element with valency 4.
- 6) The valency of iron in  $Fe_2O_3$  is 3.

11. i) Atoms - An atom is the smallest particle of an element that exhibits all the properties of that element. It may or may not exist independently but takes part in every chemical reaction.
- 2) Molecule - A molecule is the smallest particles of a pure substance which has independent existence. It ~~ex~~ exhibits all the properties of that pure substance.
  - 3) Valency - Valency is the combining capacity of an element or of a radical.
  - 4) Radicals - A radical is an atom or a group of an element or a group of atoms of different elements that behaves as a single unit with a positive or negative charge on it.

B) Basic Radical = They have positive charge and are also called cations. All metallic ions and ammonium ions are basic radicals.

Level - 2

1/2 Ans - CaO



∴ Valency of O is 2.



∴ Valency of  $CO_3$  is 2.

2) Ans.	Basic Radical	Acidic Radical
	<ul style="list-style-type: none"> <li>• These radicals have positive charge and are also called cations.</li> <li>• All metallic ions and ammonium ion are basic radicals.</li> </ul>	<ul style="list-style-type: none"> <li>• These radicals have negative charge and are also called anions.</li> <li>• Most of non-metallic ions are acid radicals.</li> </ul>

3) Ans - A molecular formula of a compound is the symbolic representation of its molecule. It shows the number of atoms of each element present in it. These atoms combine in whole numbers to form the molecule. Ex -  $SO_2$

4) Ans - When atoms

4) Ans - When atoms of two or more elements join together in a fixed ratio by mass, a molecule of a compound is formed. Ex - Two atoms of hydrogen and one atom of oxygen combine to form a molecule of water.

5) Ans	Atom	Molecule
	<ul style="list-style-type: none"> <li>• Atom is the smallest unit of an element.</li> <li>• Atoms may or may not</li> </ul>	<ul style="list-style-type: none"> <li>• Molecule is the smallest unit of element or a compound.</li> <li>• Molecules always</li> </ul>

exist independently.

exist independently.

Q) Ans

Certain elements exhibit more than one valency, i.e. they show variable valency. Metals like iron and copper have variable valencies. Iron exhibits valency of 2 and 3 while copper exhibits valency of 1 and 2.

Q) Ans-

### Molecules

- A molecule is the smallest particle of a pure substance (element or compound).
- It doesn't contain any electrical charge.

### Radicals

- A radical is an atom of an element or a group of atoms of different elements.
- It contains positive or negative charges.