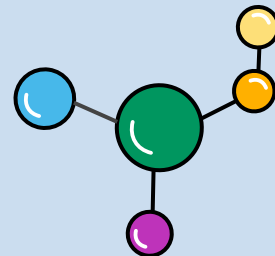
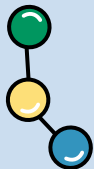


9th Grade

CHEMISTRY CHAPTER -03

ATOMS AND MOLECULES

LECTURE-03



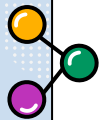


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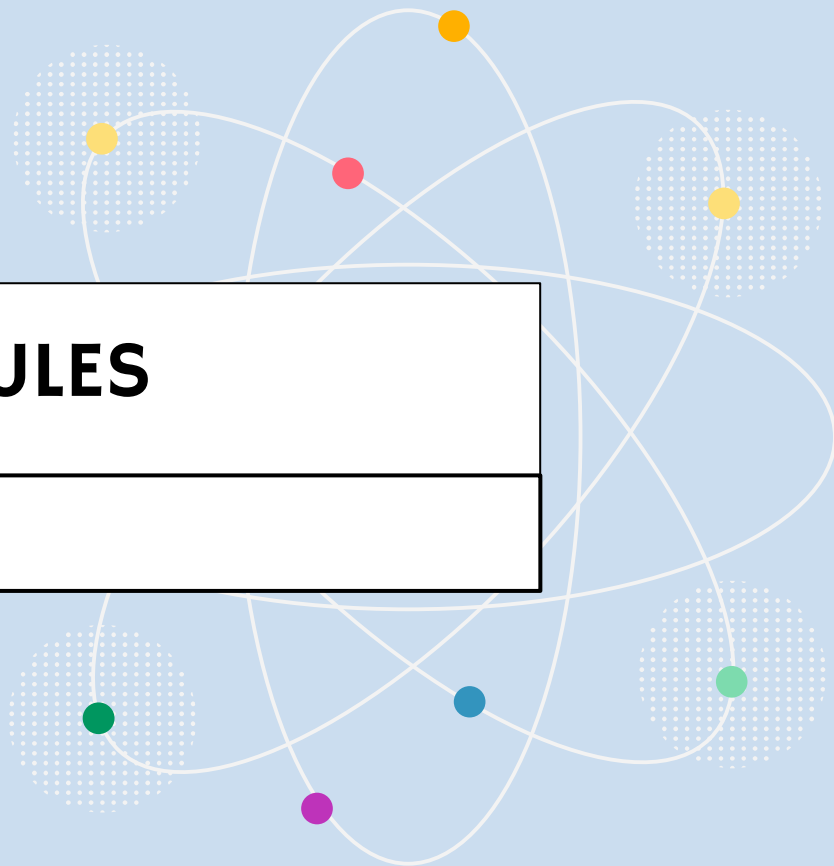
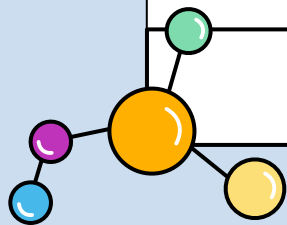
CHEMICAL FORMULAE

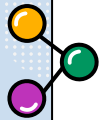
04

SUMMARY

01

MOLECULES





WHAT IS MOLECULES ?

The atoms of the same or different elements are bonded together tightly by some strong forces of attraction also called chemical bonds. The new species which are formed as a result of this chemical combination are called **molecules**.

Definition : Molecules represents a group of two or more atoms (same or different) chemically bonded to each other and held tightly by strong attractive forces.

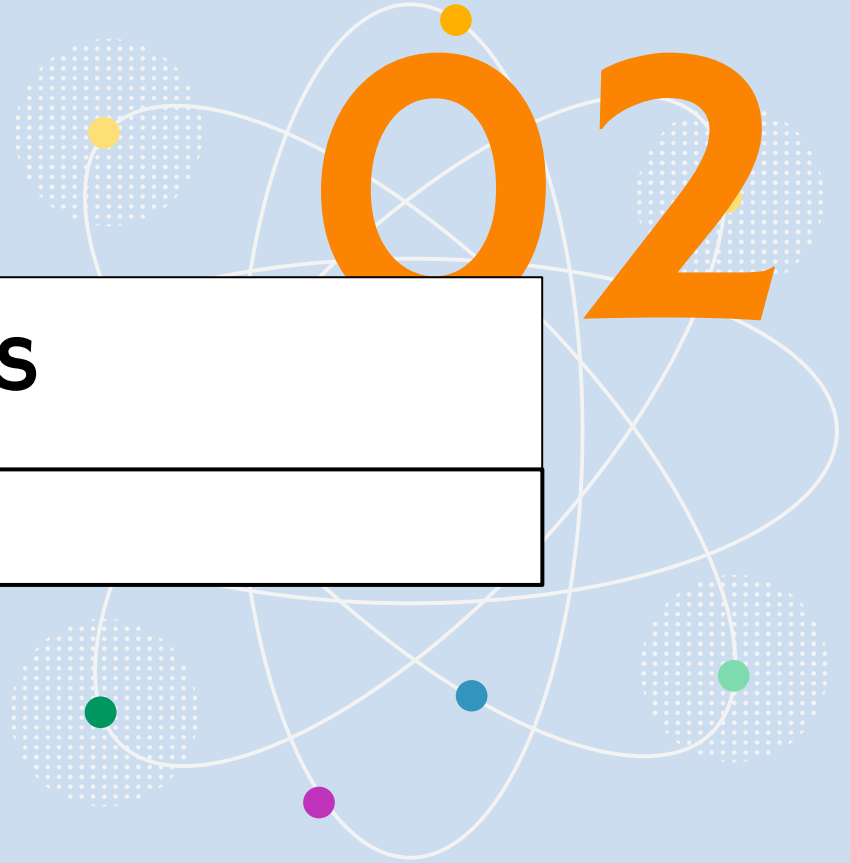
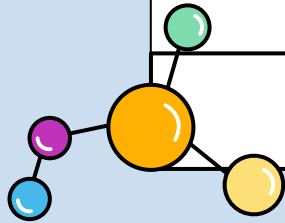
Molecules are represented in terms of symbols of constituting atoms, and it is known as chemical formula.

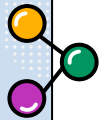
Molecules are of two types

- Homoatomic (Molecules of elements)
- Heteroatomic (Molecules of compounds)

IONS

02





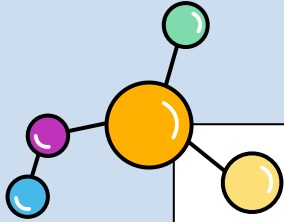
WHAT IS IONS ?

Charged species are known as **ions**.

Definition : **an atoms or group of atoms having positive or negative charge**

Ions are of two types

- The ion which has one or more positive charge is called **CATION**
- The ion which has one or more negative charge is called **ANION**



CHEMICAL FORMULAE

03



CHEMICAL FORMULAE OF COMPOUNDS

Definition : the shorthand representation of the name of a molecule in terms of the symbols of the constituting atoms.

For example,

Formula of Water :

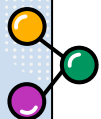
Formula of Ammonia :

Formula of Sodium Chloride :

Formula of Sulphuric acid :

In molecules, the atoms are combined with each other. Different elements have different combining capacity of their atoms. This is known as **Valency**

Definition : the combining capacity of an element is known as Valency.



WRITING CHEMICAL FORMULAE

1 H																	2 He
3 Li	4 Be											5 B	6 C	7 N	8 O	9 F	10 Ne
11 Na	12 Mg											13 Al	14 Si	15 P	16 S	17 Cl	18 Ar
19 K	20 Ca	21 Sc	22 Ti	23 V	24 Cr	25 Mn	26 Fe	27 Co	28 Ni	29 Cu	30 Zn	31 Ga	32 Ge	33 As	34 Se	35 Br	36 Kr
37 Rb	38 Sr	39 Y	40 Zr	41 Nb	42 Mo	43 Tc	44 Ru	45 Rh	46 Pd	47 Ag	48 Cd	49 In	50 Sn	51 Sb	52 Te	53 I	54 Xe
55 Cs	56 Ba	71 Lu	72 Hf	73 Ta	74 W	75 Re	76 Os	77 Ir	78 Pt	79 Au	80 Hg	81 Tl	82 Pb	83 Bi	84 Po	85 At	86 Rn
87 Fr	88 Ra	103 Lr	104 Rf	105 Db	106 Sg	107 Bh	108 Hs	109 Mt	110 Ds	111 Rg	112 Cn	113 Nh	114 Fl	115 Mc	116 Lv	117 Ts	118 Og
57 La	58 Ce	59 Pr	60 Nd	61 Pm	62 Sm	63 Eu	64 Gd	65 Tb	66 Dy	67 Ho	68 Er	69 Tm	70 Yb				
89 Ac	90 Th	91 Pa	92 U	93 Np	94 Pu	95 Am	96 Cm	97 Bk	98 Cf	99 Es	100 Fm	101 Md	102 No				

The background is a light blue gradient. It features several stylized atomic models. Each model consists of a central nucleus made of small colored dots (yellow, green, blue, orange) and several elliptical orbits (white lines) with small colored dots representing electrons. The central text box is white with a black border. The word "THANKS" is written in large, bold, black capital letters. Below it, the text "Revise Last Chapter, Learn 20 Elements" is written in a smaller, black, sans-serif font.

THANKS

Revise Last Chapter, Learn 20 Elements