

UPDAAN

2025

Bharat Mata ki
Jail

ESSENTIAL CHEMISTRY BASICS for Class 10

MASTER BASICS OF CHEMISTRY – I

CHEMISTRY

Lecture – 01

BY: SUNIL BHAIYA



Topics

to be covered



- 1 Basic Introduction to Atom
- 2 Atomic Number and Chemical Symbol





Class Content Flow and Rules

Concepts to be taught today
(Knowledge Ride)



Warm-up
Self-made
Chemistry riddles
(Riddle Wallah)



Teaching +
Question practice
Let's Practice, Give a Thought, Beat Your Brains Out
and PYQs' Wallah



Important ✓
Gyaan to make you
a better human
Insaniyat Ka Gyaan



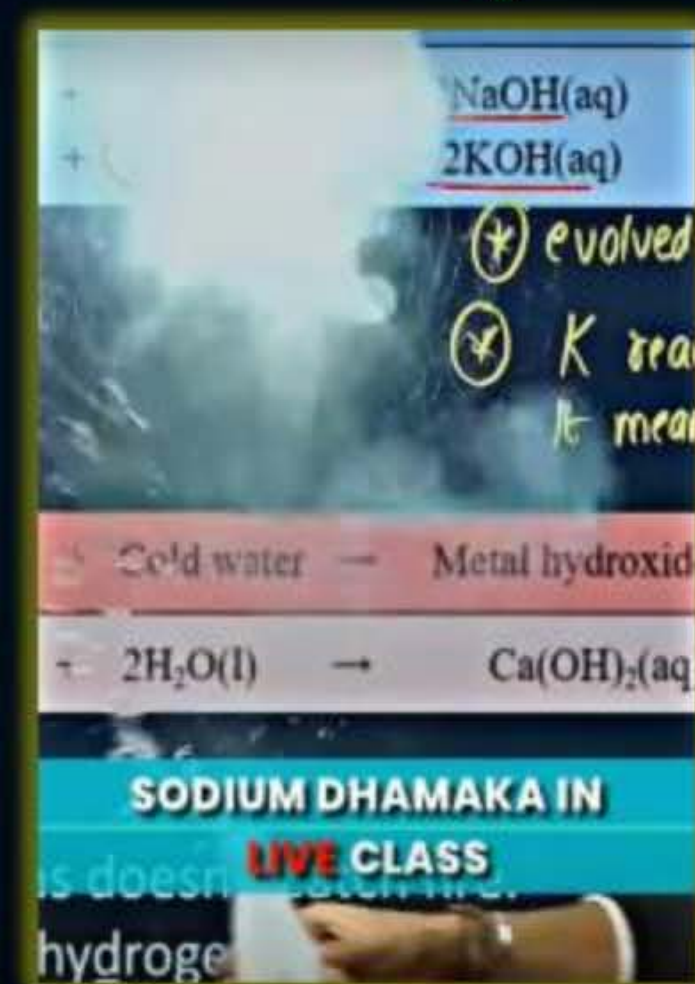
Homework
(Concept Polish)



Tips to increase
study efficiency
(Efficiency Hacks)

Class Content Flow and Rules

Live experiments - PW प्रयोगशाला By Sunil Bhaiya





Class Content Flow and Rules

→ Samaj mein aaye toh likhna hai
AYE BHAIYA – *Another way to say* YES

→ Nahi samaj mein aaye toh likhna hai
Mushkil ni hai aa jaega

Wagt ko thoda
waqt denge!

→ Respect everyone! Don't spam!
Dil par patthar rakhte hue block kr dia jaega

Give Respect
Take Respect

This year
↓
CLEAR DISTINCTION BETWEEN
(NCERT) & (EXTRA CONTENT)

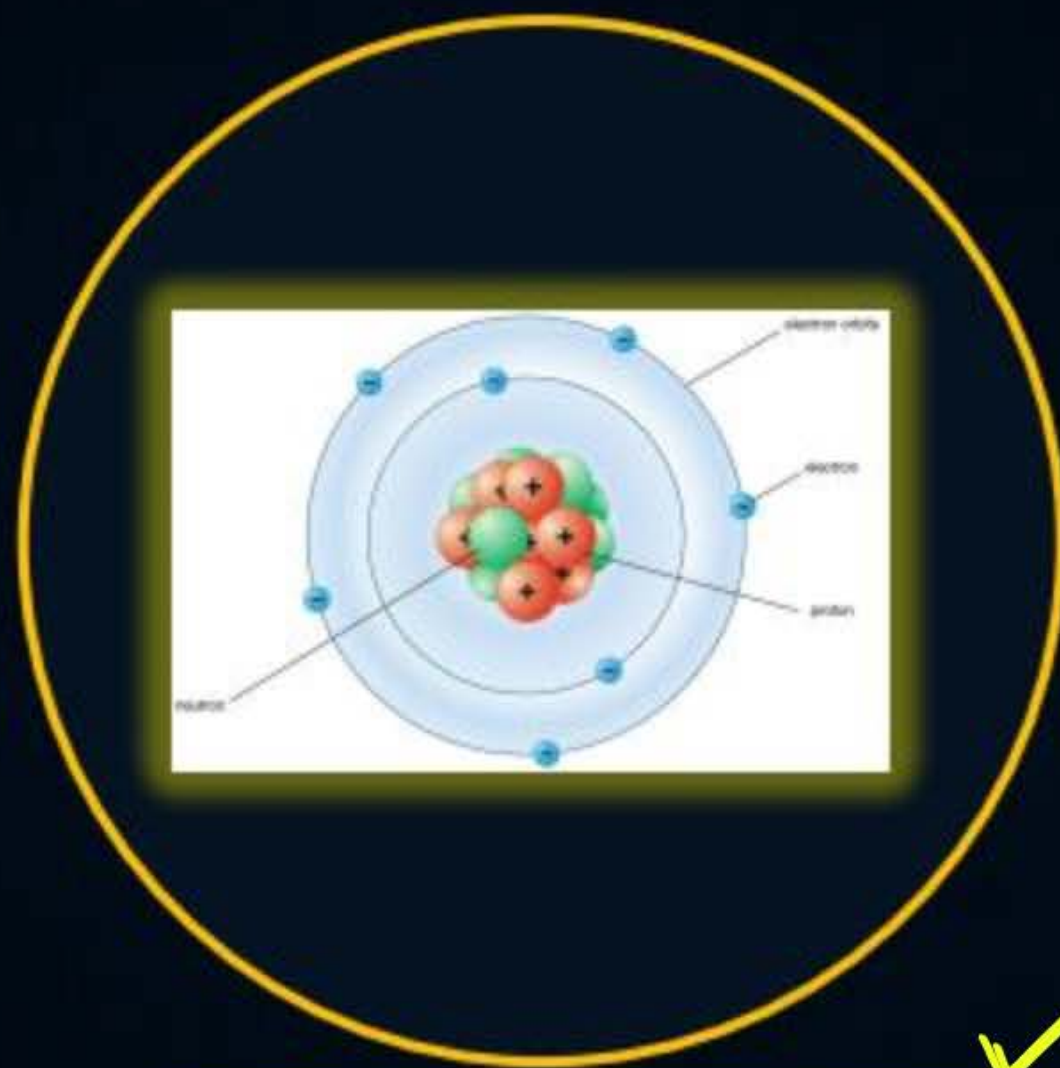
⇓
HIGH quality & quantity of content

↓
 By Sunil Bhoirya

Yippee!!!

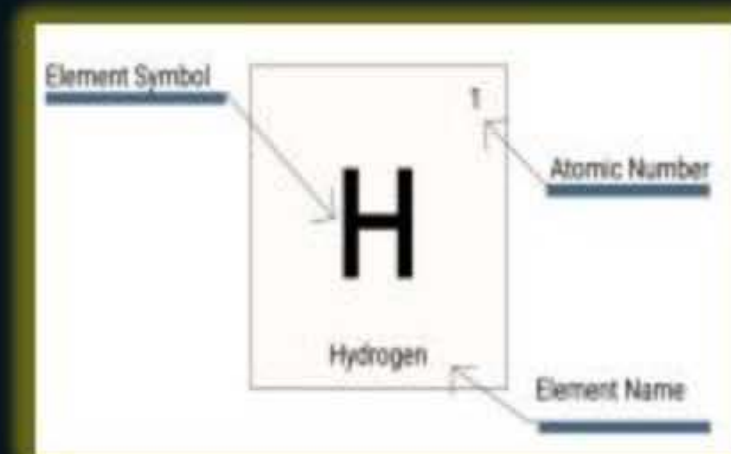
Hasmukhlal and Simaila bhi pad henge
apke sath NEXT CLASS se ♥

Knowledge Ride On



Basic Introduction to Atom

Knowledge Ride On



Atomic Number and Chemical
Symbol



Identify the chemical formula formed by the series 'K, L, M, N, O'.

K to O





Identify the chemical formula formed by the series 'K, L, M, N, O'.

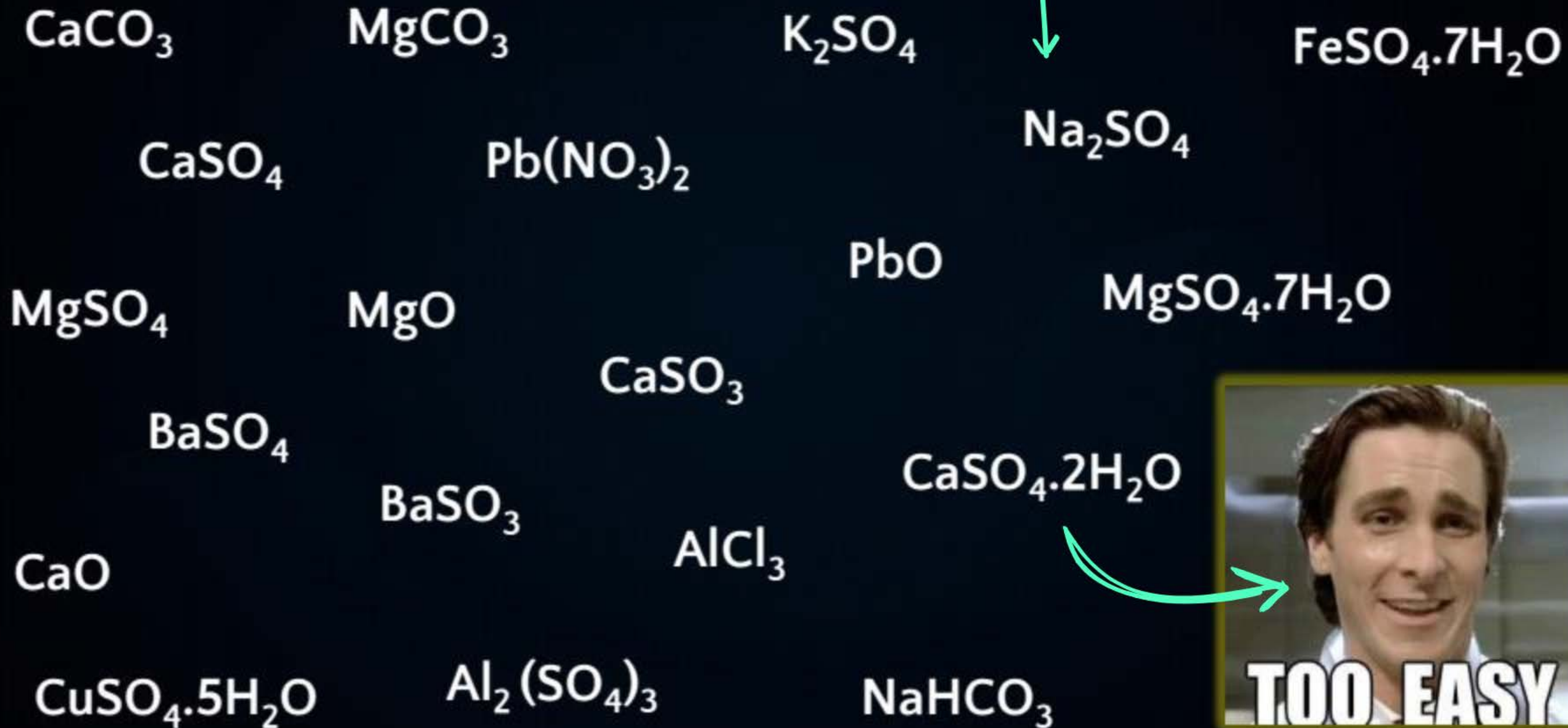


WAAH KYA
BAAT HAI!

Sundar Balak/Sundar
Kanya Be Like



One of the Needs to Learn Chemistry Basics





Basic Introduction to Atom (परमाणु)



YEH ATOM ATOM KYA HAI?



A +  = ATOM

Tom

Nahi! Yeh nahi hai.



YEH ATOM ATOM KYA HAI?



Sundar Balak/Sundar Kanya
Be Like:



**Aarey, yeh kya
bol rahe hai**

BASIC INTRODUCTION TO ATOM

(परमाणु)



- The word 'atom' was coined by John Dalton which he derived from a Greek word 'atomos' given by Democritus in 400 BC.

'uncuttable/indivisible'

[it is not made
from anything]



named as 'atomos'

You will reach
one stage where
you are unable
to divide it further



BASIC INTRODUCTION TO ATOM



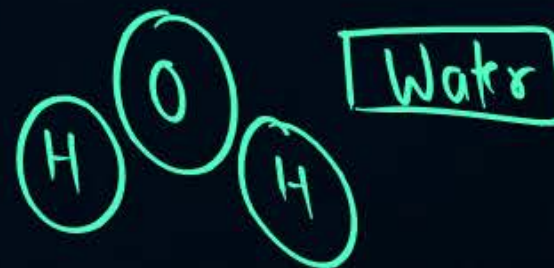
- The modern definition of an atom is that *it is the smallest particle of any substance that may or may not be capable of independent existence.*

free

Helium →
gas



Combined





GIVE A THOUGHT



Do you think an atom is indivisible?

A. YES

✓ B. NO

Atom is divisible!

BASIC INTRODUCTION TO ATOM



atom is divisible

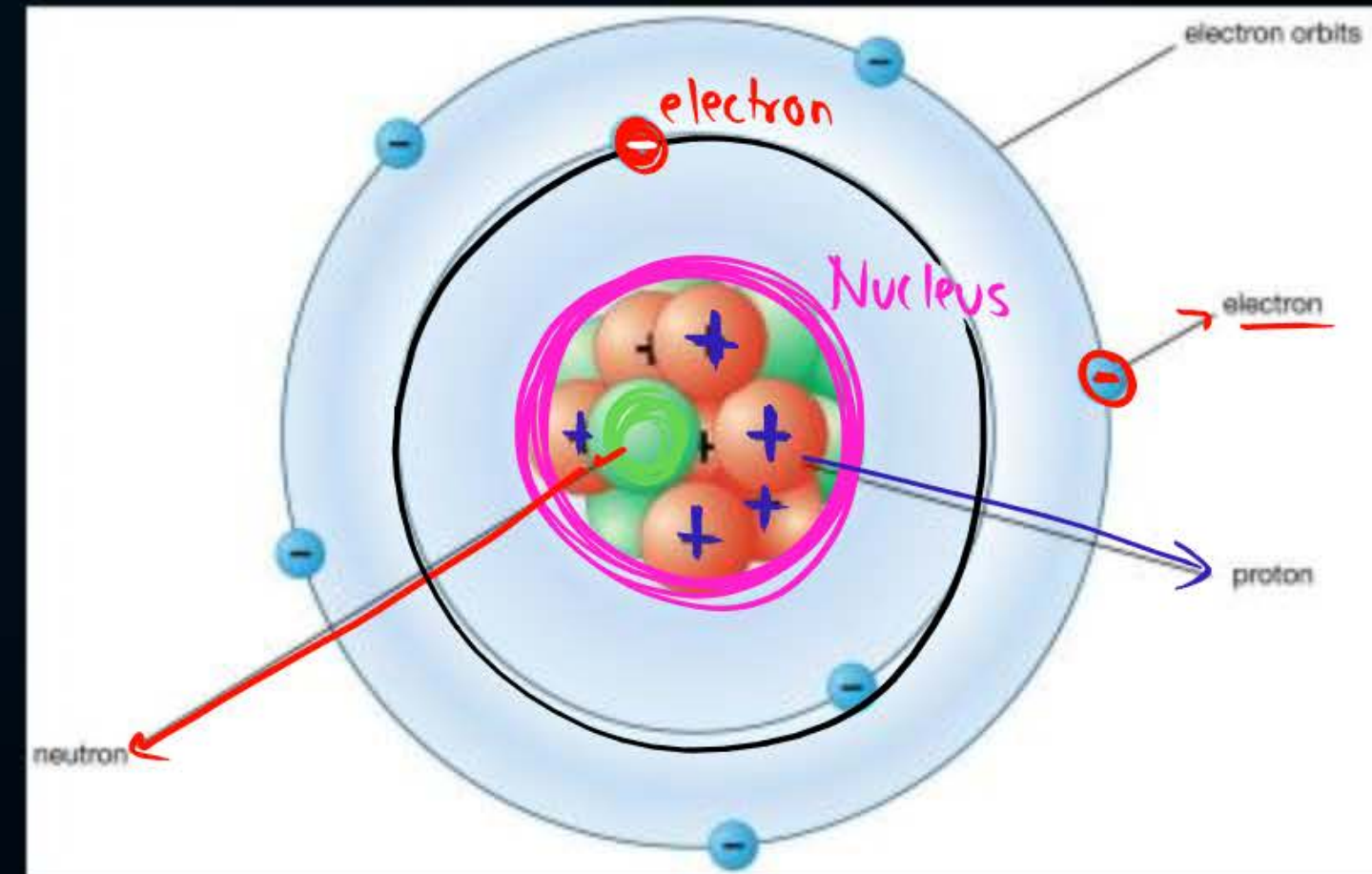
(i) Atom is divided into sub-atomic particles.

(ii) नाभिक Nucleus is present at the centre of atom.

(iii) Protons (+vely charged) particle and neutrons (neutral) particle are at the centre of the atom.

(iv) Electrons (-vely charged) particle revolve around the nucleus in orbits.

Bohr's Atomic Model



KYA BOLTI PUBLIC



Aye bhaiya ♡

Element (द्रव)



RECAP: An element is a chemical substance that is made from same kind of atoms.



Atomic Number and Chemical Symbol



ATOMIC NUMBER (Z)

परमाणु संख्या

Concept - I

- Atomic number (Z) is the number of protons present inside the nucleus of an atom.

(नाभिक)

(परमाणु)

- Atomic number is electrically neutral because:

An atom

no. of protons = no. of electrons

no overall charge

Electrically charged particles



GIVE A THOUGHT



Why atomic number is considered equal to the number of protons
and not electrons?



GIVE A THOUGHT



Why atomic number is considered equal to the number of protons and not electrons?

If atomic number = number of electrons

Atomic number will continuously change.

An atom loses/gains/share electrons to
become stable

To keep atomic number as a fixed quantity it is considered equal to number of protons because in simple chemical reactions they won't leave the nucleus.



CHARACTERISTICS OF ATOMIC NUMBER



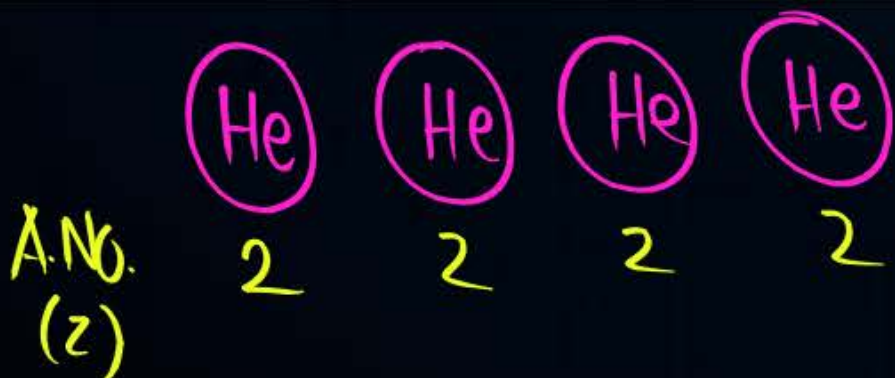
- Atomic number is a whole number quantity and it can never be fractional or in decimal.

1	✓	1.2	×
2	✓	6.8	×
3	✓	5.4	×

- Atomic number of an element is always fixed and it cannot be same for two different elements.

↓
no. of protons remains fix

- All atoms of an element have same atomic number.





GIVE A THOUGHT



The chemical symbol of nitrogen is:

- ✓ A. N
- B. N₂



GIVE A THOUGHT



The chemical symbol of nitrogen is:

- A. N
- B. N₂

[Check Periodic Table]

- Chemical symbol of an element represents one atom of that element.
- It also tells us about the name of that element.

Element	Chemical Symbol	Exists as
(i) Nitrogen	N	N ₂
(ii) Oxygen	O	O ₂
(iii) Hydrogen	H	H ₂



TRICK TO REMEMBER THE FIRST 20 ELEMENTS

HEY!



Hey

↓
Hydrogen (H)

Henry

↓
Helium (He)

Listen

↓
Lithium (Li)

B

↓
Beryllium (Be)

B

↓
Boron (B)

5

C

↓
Carbon (C)

6

News

↓
Nitrogen (N)

7

On

↓
Oxygen (O)

8

Friday

↓
Fluorine (F)

9

Night

↓
Neon (Ne)

10

A.No.
(Z)

1

2

3

4



TRICK TO REMEMBER THE FIRST 20 ELEMENTS



Naxiyal
⑪ Sodium (Na)



Mango
⑫ Magnesium (Mg)



Aloo
⑬ Aluminium (Al)



Salad
⑭ Silicon (Si)



Pepsi
⑮ Phosphorus (P)

Soda ⑯ Sulphur (S)



Coca-Cola ⑰ Chlorine (Cl)



Aur ⑱ Argon (Ar)

और

⑲ Potassium (K) Kaju - Catli → ⑳ Calcium (Ca)





S. No.	English name	Latin name	Symbol
1	Sodium	<u>N</u> atrium	<u>Na</u>
2	Potassium	<u>K</u> alium	<u>K</u>
3	Iron	<u>F</u> errum	<u>Fe</u>
4	Copper	<u>C</u> uprum	<u>Cu</u>
5	Silver	<u>A</u> rgentum	<u>Ag</u>
6	Gold	<u>A</u> urum	<u>Au</u>
7	Mercury	<u>H</u> ydrargyrum	<u>Hg</u>
8	Lead	<u>P</u> lumbum	<u>Pb</u>
9	Tin	<u>S</u> tannum	<u>Sn</u>
10	Antimony	<u>S</u> tibium	<u>Sb</u>

S. No.	English name	German name	Symbol
11	Tungsten	Wolfram	<u>W</u>

Let's Practice



PW Ka **ChemStar!**

QUESTION



The chemical symbol of tungsten is:

A Tn

B Sn

☒ **C** W

D T

KYA BOLTI PUBLIC



Aye
bhaiya ♡

Concept Polish (गृहकार्य)





NO HOMEWORK DAY

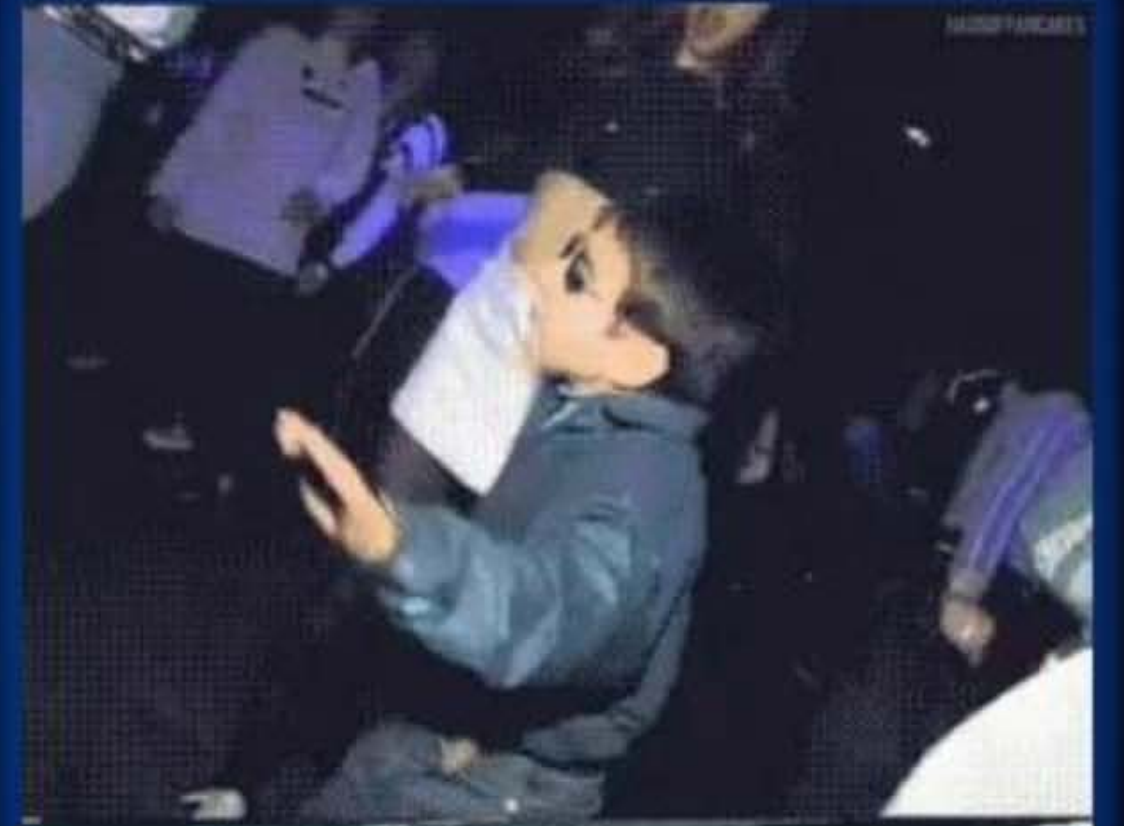
EFFICIENCY HACKS BY SUNIL BHAIYA



non-academic
doubts

Tips to Avoid Sleep While Studying!

- ✓ (i) Don't feel too comfortable while studying.
- ✓ (ii) Stay hydrated while studying.
- ✓ (iii) Read aloud, walk and write more.
- ✓ (iv) Talk proper sleep of 6-8 hours.



Insaniyat Ka Gyaan



*Insaniyat Ka Gyaan
Jo Banae Behtar Insan*

SUNIL BHAIYA IS ALWAYS THERE FOR YOU.

#sbsathhai

#pwsathhai



**THANK
YOU**

