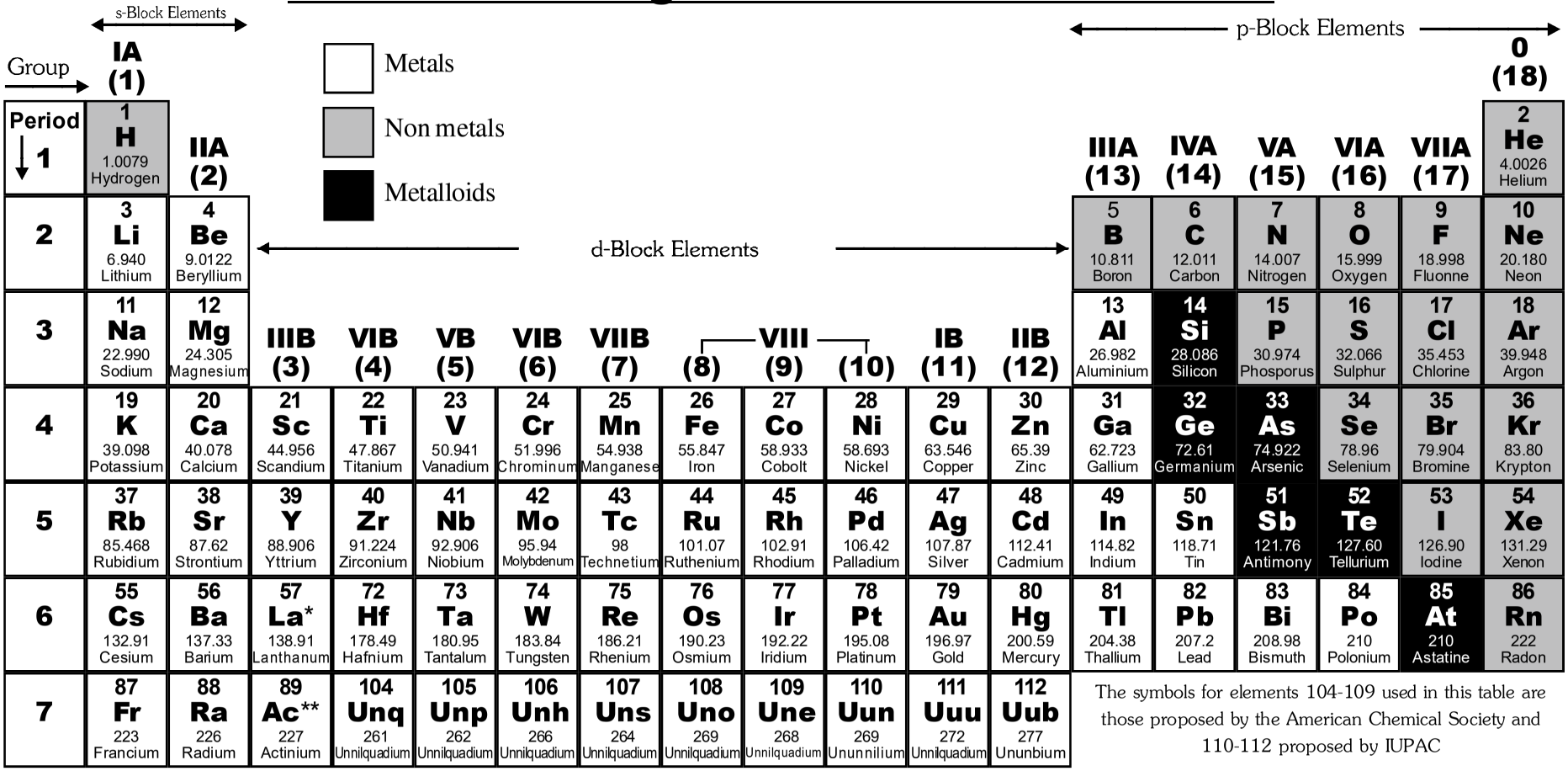
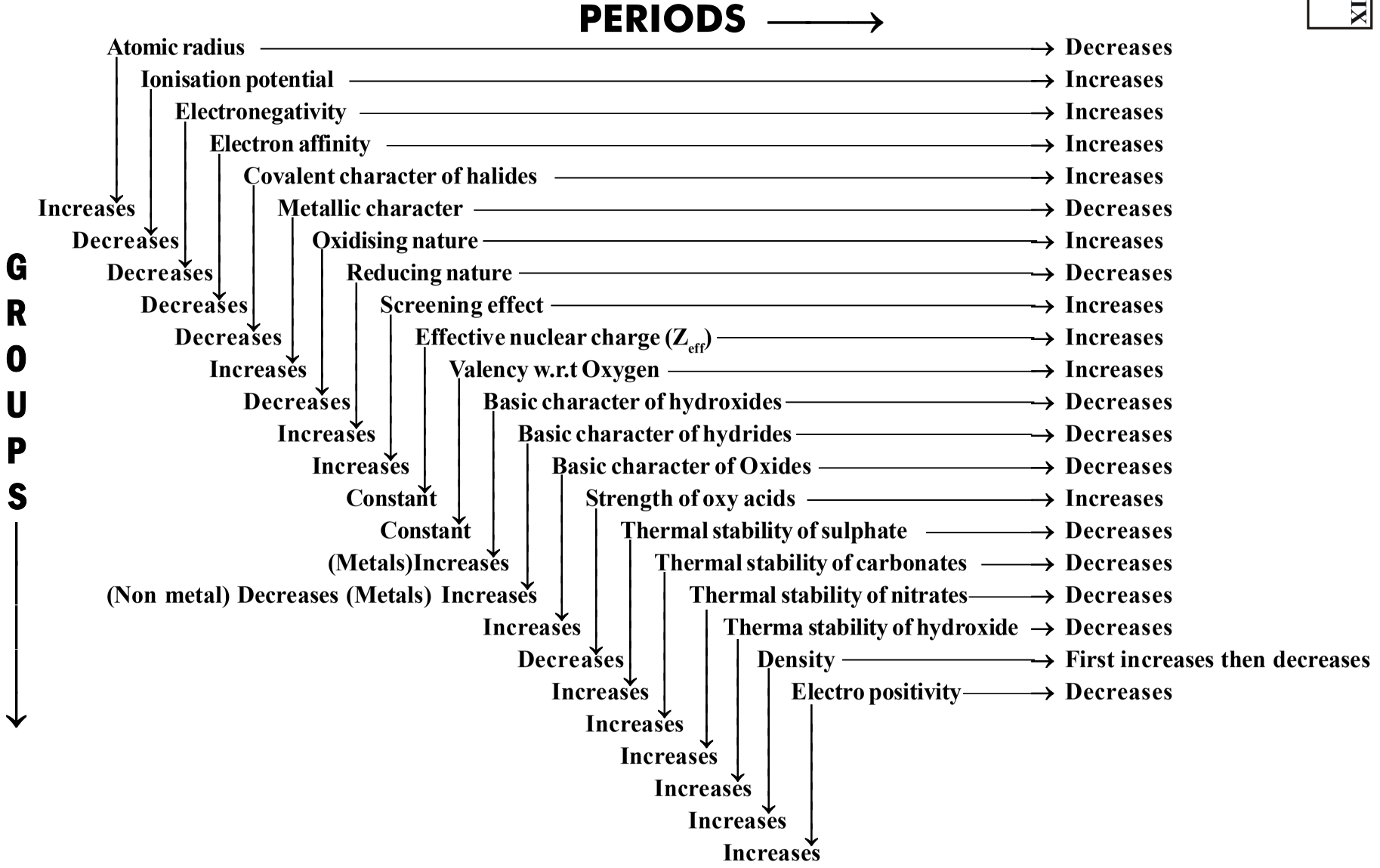
Extended or Long Form of the Periodic Table

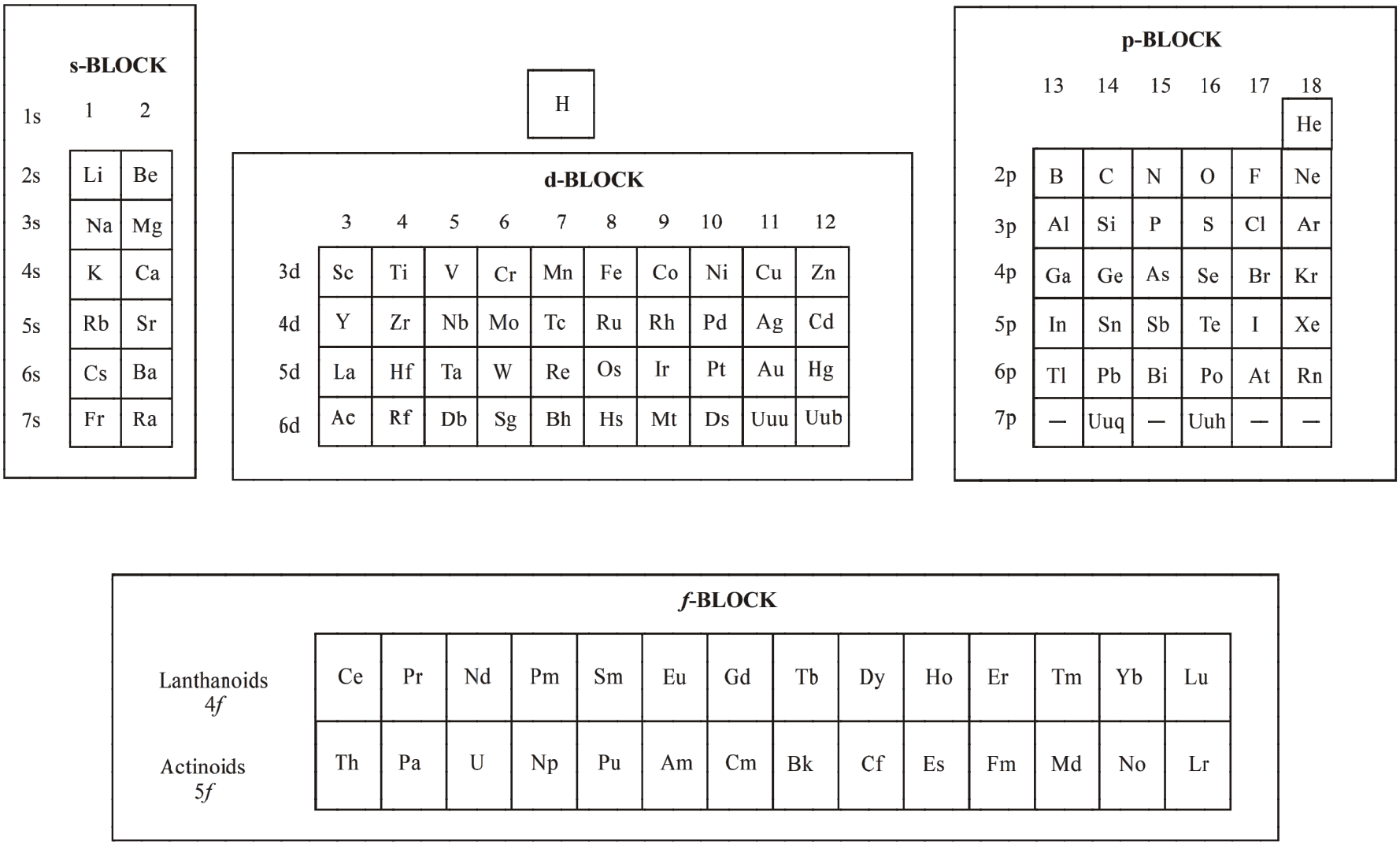


The symbols for elements 104-109 used in this table are those proposed by the American Chemical Society and 110-112 proposed by IUPAC

IUPAC designations of groups of elements are given in brackets

GENERAL TREND OF DIFFERENT PROPERTIES IN THE PERIOD AND GROUPS





The Types of elements in the Periodic Table based on the orbitals that are being filled.

APPENDIX **B**

IMPORTANT FACTS TO REMEMBER

1.	Lowest electronegativity	:	Cs
2.	Highest electronegativity	:	F
3.	Highest ionisation potential	:	He
4.	Lowest ionisation potential	:	Cs
5.	Lowest electron affinity	:	Noble gases
6.	Highest electron affinity	:	Chlorine
7.	Least electropositive element	:	F
8.	Lowest m. pt. metal	:	Hg
9.	Highest m. pt. and b. pt. metal	:	W (Tungsten)
10.	Lowest m. pt. and b. pt. non metal	:	He
11.	Notorious element	:	Hydrogen
12.	Lightest element	:	Hydrogen
13.	Smallest atomic size	:	H
14.	Largest atomic size	:	Cs
15.	Largest anionic size	:	I^-
16.	Smallest cation	:	H^+
17.	Most electropositive element	:	Cs
18.	Element with electronegativity next to Fluorine	:	Oxygen
19.	Group containing maximum no. of gaseous elements in periodic table	:	Zero group
20.	Total number of gaseous elements in periodic table	:	11 (H, N, O, F, Cl, He, Ne, Ar, Kr, Xe, Rn)
21.	Total number of liquid elements in periodic table	:	6 (Ga, Br, Cs, Hg, Fr, Uub)
22.	Liquid element of radioactive nature	:	Fr

23.	Total number of radioactive elements in periodic table	:	25
24.	Volatile d block elements	:	Zn, Cd, Hg, Uub
25.	Element containing no neutron	:	H
26.	Most abundant element on earth	:	Oxygen
27.	Most abundant metal on earth	:	Al
28.	Element having maximum tendency for catenation	:	Carbon
29.	Non metal having highest m. pt., b.pt.	:	Carbon (dimond)
30.	Metals showing highest oxidation number	:	Os (+8), Ru
31.	Most electrovalent compound	:	CsF
32.	Most stable carbonate	:	Cs_2CO_3
33.	Strongest alkali	:	CsOH
34.	Strongest basic oxide	:	Cs_2O
35.	Best electricity conductor among metals	:	Ag
36.	Best electricity conductor among non metals	:	graphite
37.	Most poisonous element	:	Pu (Plutonium)
38.	Liquid non metals	:	Br
39.	Element kept in water	:	Phosphorous
40.	Elements kept in kerosene	:	IA group element (except Li)
41.	Elements sublime on heating	:	I_2
42.	Noble metals	:	Au, Pt etc.
43.	Amphoteric metal	:	Be, Zn, Al, Sn, Pb, Ga
44.	Metalloids elements	:	Si, As, Te, At, Ge, Sb
45.	Non metals having metallic lusture	:	Graphite, Iodine
46.	Heaviest naturally occurring element	:	Uranium
47.	Poorest conductor of electricity	:	Dimond

48.	Hardest naturally ocurring element	:	Dimond
49.	Lightest solid metal	:	Li
50.	90% of Sun mass	:	Hydrogen
51.	Amphoteric oxides	:	BeO, Al_2O_3, ZnO, PbO, PbO_2, SnO, SnO_2, Sb_2O_3, As_2O_3, Cr_2O_3 etc.
52.	Neutral oxides of non metals	:	NO, CO, H_2O, N_2O
53.	Dry bleacher	:	H_2O_2
54.	Dry ice	:	Solid CO_2
55.	Artificial explosive	:	TNT, RDX (Research Developed Explosive etc.)
56.	First noble prize of chemistry was given to	:	Vantt Haff
57.	Some isomorphous substances	:	$FeSO_4.7H_2O$, $MgSO_4.7H_2O$, $ZnSO_4.7H_2O$
58.	Some effloroscent substances	:	$Na_2CO_3.10H_2O$, $MgSO_4.7H_2O$ etc.
59.	First man made element	:	Tc_{43} (Technicium)
60.	Smallest period	:	Ist (2 elements)
61.	Largest period in periodic table	:	6th (32 element)
62.	Largest group in periodic table	:	IIIB (32 element)
63.	Most abundant d-block metal	:	Fe
64.	Most abundant s-block metal	:	Ca
65.	Most stable element	:	Te
66.	Highest density (Metals)	:	Os, Ir
67.	Highest density (Non Metals)	:	Boron

IMPORTANT SCIENTISTS & THEIR CONTRIBUTIONS

1.	Dobereiner	Law of Triads
2.	Fajans	Factors of polarisation.
3.	Lavoisier	Father of chemistry, classified element into metals & non metals.
4.	Glesspie - Nyholm	VSEPR Theory
5.	Mendeleef	Periodic classification of elements.
6.	Mosley	Concept of atomic number, modern periodic law, modern periodic table
7.	Newland	Law of octaves.
8.	Slater	Screening constant, Geometry of molecules.
9.	Schoomaker & Stevenson	Bond length depends on difference in electronegativity
10.	Lewis and Kossel	Electronic theory - octet rule
11.	Rang & Warner	Long form of modern periodic table
12.	Ramsay	Introduced noble gases in periodic table, Argon was discovered.
13.	Seaborg	Post-Uranic elements
14.	Heitler and London	Valence bond theory.
15.	Hund's rule	Distribution of electrons in atomic orbitals in a sub - shell.
16.	Pauling	Concept of dipole moment, valence bond theory Hybridization, Electronegativity scale.
17.	Sidgwick and powell	Hybridisation.
18.	Hanny - Smith	Nature of bonds.