

Know the abbreviations and names of shaded elements.

A copy of the periodic table provided on the exam is linked from the same page you found this document.

PERIOD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	IA		IIA										IIIA	IVA	VA	VIA	VIIA	VIIIA
1	H Hydrogen												B Boron	C Carbon	N Nitrogen	O Oxygen	F Fluorine	Ne Neon
2	Li Lithium	Be Beryllium											Al Aluminum	Si Silicon	P Phosphorus	S Sulfur	Cl Chlorine	Ar Argon
3	Na Sodium	Mg Magnesium																
4	K Potassium	Ca Calcium	Sc Scandium	Ti Titanium	V Vanadium	Cr Chromium	Mn Manganese	Fe Iron	Co Cobalt	Ni Nickel	Cu Copper	Zn Zinc	Ga Gallium	Ge Germanium	As Arsenic	Se Selenium	Br Bromine	Kr Krypton
5	Rb Rubidium	Sr Strontium	Y Yttrium	Zr Zirconium	Nb Niobium	Mo Molybdenum	Tc Technetium	Ru Ruthenium	Rh Rhodium	Pd Palladium	Ag Silver	Cd Cadmium	In Indium	Sn Tin	Sb Antimony	Te Tellurium	I Iodine	Xe Xenon
6	Cs Cesium	Ba Barium	Lu Lutetium	Hf Hafnium	Ta Tantalum	W Tungsten	Re Rhenium	Os Osmium	Ir Iridium	Pt Platinum	Au Gold	Hg Mercury	Tl Thallium	Pb Lead	Bi Bismuth	Po Polonium	At Astatine	Rn Radon
7	Fr Francium	Ra Radium	Lr Lawrencium	Rf Rutherfordium	Db Dubnium	Sg Seaborgium	Bh Bohrium	Hs Hassium	Mt Meitnerium	Ds Darmstadtium	Rg Roentgenium	Cn Copernicium	Nh Nihonium	Fl Flerovium	Mc Moscovium	Lv Livermorium	Ts Tennessine	Og Oganesson

57	58	59	60	61	62	63	64	65	66	67	68	69	70
La Lanthanum	Ce Cerium	Pr Praseodymium	Nd Neodymium	Pm Promethium	Sm Samarium	Eu Europium	Gd Gadolinium	Tb Terbium	Dy Dysprosium	Ho Holmium	Er Erbium	Tm Thulium	Yb Ytterbium
89	90	91	92	93	94	95	96	97	98	99	100	101	102
Ac Actinium	Th Thorium	Pa Protactinium	U Uranium	Np Neptunium	Pu Plutonium	Am Americium	Cm Curium	Bk Berkelium	Cf Californium	Es Einsteinium	Fm Fermium	Md Mendelevium	No Nobelium

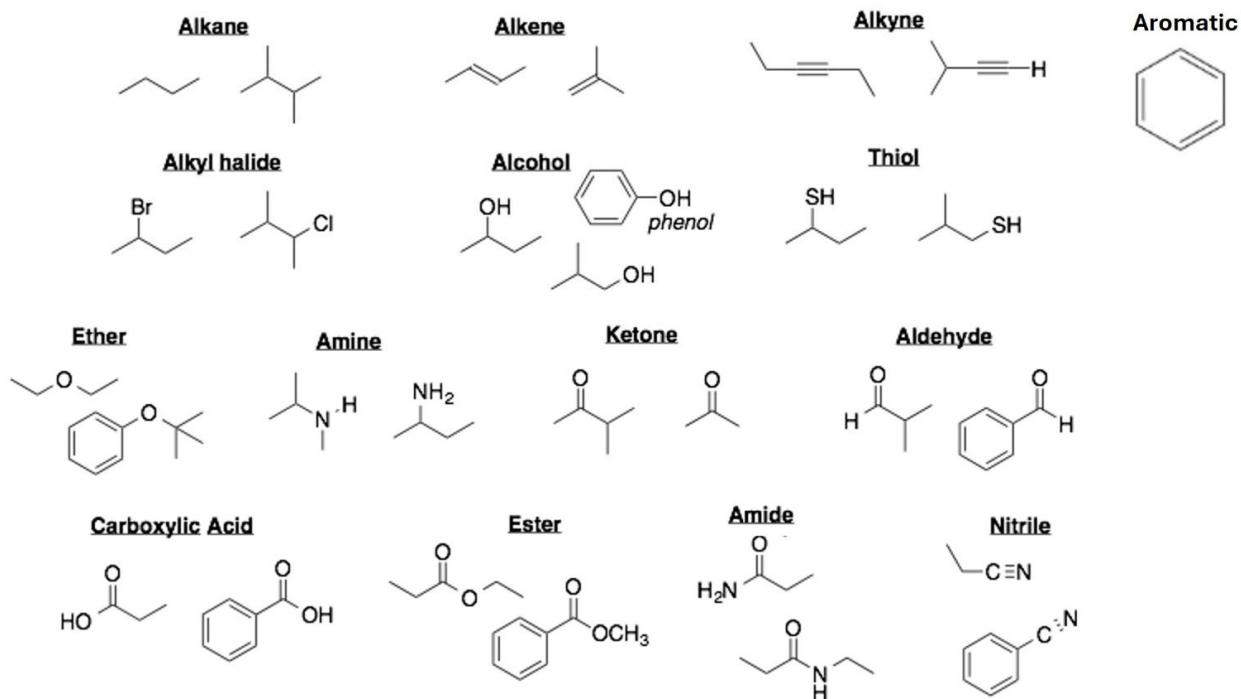
Soluble compounds contain	Except when paired with
Group I metal cations or NH ₄ ⁺	None
CH ₃ COO ⁻ , NO ₃ ⁻ , ClO ₃ ⁻ or ClO ₄ ⁻	None
Cl ⁻ , Br ⁻ , or I ⁻	Ag ⁺ , Hg ₂ ²⁺ , Pb ²⁺
SO ₄ ²⁻	Ag ⁺ , Hg ₂ ²⁺ , Pb ²⁺ , Ca ²⁺ , Sr ²⁺ , Ba ²⁺
Insoluble compounds contain	Except when paired with
CO ₃ ²⁻ , CrO ₄ ²⁻ , PO ₄ ³⁻ , or SO ₃ ²⁻	Group I cations or NH ₄ ⁺
S ²⁻ or OH ⁻	Group I cations or NH ₄ ⁺ , or Ba ²⁺
Ag ⁺ , Hg ₂ ²⁺ , and Pb ²⁺	CH ₃ COO ⁻ , NO ₃ ⁻ , ClO ₃ ⁻ or ClO ₄ ⁻

Compounds listed as "slightly soluble" are treated as insoluble.

Strong Acids	Strong Bases
HCl, HBr, HI, HNO ₃ , HClO ₄ , H ₂ SO ₄	Group I & II metal hydroxides

Prefix	Symbol	Multiplier
tera	T	10 ¹²
giga	G	10 ⁹
mega	M	10 ⁶
kilo	k	10 ³
deci	d	10 ⁻¹
centi	c	10 ⁻²
milli	m	10 ⁻³
micro	μ or mc	10 ⁻⁶
nano	n	10 ⁻⁹

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Nuclear Decay Reactions

Type of radiation	Symbol	Mass number	charge
Alpha particle	α or ${}^4_2\text{He}$	4	2+
Beta particle	β or ${}^0_{-1}e$	0	1-
Gamma ray	γ or ${}^0_0\gamma$	0	0
Neutron	1_0n	1	0
Positron	β ⁺ or 0_1e	0	1+