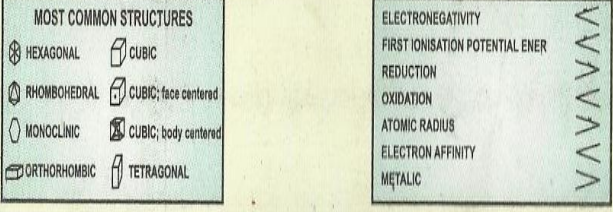
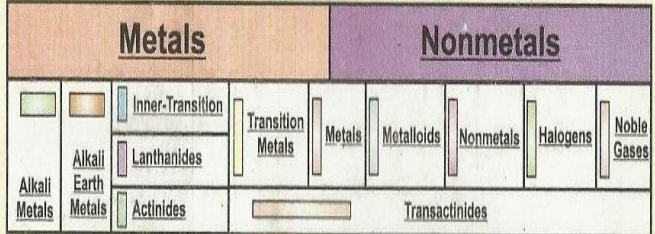


MODERN PERIODIC TABLE OF THE ELEMENTS (LONG FORM)

JAMIA URDU HIND

PERIODIC TABLE

Groups	IA	Metals										Nonmetals						0	
Periods	1																	18	
1	1.008 H HYDROGEN 1s ¹																	4.002 He HELIUM 1s ²	
2	3 Li LITHIUM [He] 2s ¹	4 Be BERYLLIUM [He] 2s ²																	10 Ne NEON [He] 2s ² 2p ⁶
3	11 Na SODIUM [Ne] 3s ¹	12 Mg MAGNESIUM [Ne] 3s ²																	18 Ar ARGON [Ne] 3s ² 3p ⁶
4	19 K POTASSIUM [Ar] 4s ¹	20 Ca CALCIUM [Ar] 4s ²	21 Sc SCANDIUM [Ar] 3d ¹ 4s ²	22 Ti TITANIUM [Ar] 3d ² 4s ²	23 V VANADIUM [Ar] 3d ³ 4s ²	24 Cr CHROMIUM [Ar] 3d ⁵ 4s ¹	25 Mn MANGANESE [Ar] 3d ⁵ 4s ²	26 Fe IRON [Ar] 3d ⁶ 4s ²	27 Co COBALT [Ar] 3d ⁷ 4s ²	28 Ni NICKEL [Ar] 3d ⁸ 4s ²	29 Cu COPPER [Ar] 3d ¹⁰ 4s ¹	30 Zn ZINC [Ar] 3d ¹⁰ 4s ²	31 Ga GALLIUM [Ar] 3d ¹⁰ 4p ¹	32 Ge GERMANIUM [Ar] 3d ¹⁰ 4p ²	33 As ARSENIC [Ar] 3d ¹⁰ 4p ³	34 Se SELENIUM [Ar] 3d ¹⁰ 4p ⁴	35 Br BROMINE [Ar] 3d ¹⁰ 4p ⁵	36 Kr KRYPTON [Ar] 3d ¹⁰ 4p ⁶	
5	37 Rb RUBIDIUM [Kr] 5s ¹	38 Sr STRONTIUM [Kr] 5s ²	39 Y YTTRIUM [Kr] 4d ¹ 5s ²	40 Zr ZIRCONIUM [Kr] 4d ² 5s ²	41 Nb NIOBIUM [Kr] 4d ⁴ 5s ¹	42 Mo MOLYBDENUM [Kr] 4d ⁵ 5s ¹	43 Tc TECHNETIUM [Kr] 4d ⁵ 5s ²	44 Ru RUTHENIUM [Kr] 4d ⁷ 5s ¹	45 Rh RHODIUM [Kr] 4d ⁸ 5s ¹	46 Pd PALLADIUM [Kr] 4d ¹⁰ 5s ⁰	47 Ag SILVER [Kr] 4d ¹⁰ 5s ¹	48 Cd CADMIUM [Kr] 4d ¹⁰ 5s ²	49 In INDIUM [Kr] 4d ¹⁰ 5p ¹	50 Sn TIN [Kr] 4d ¹⁰ 5p ²	51 Sb ANTIMONY [Kr] 4d ¹⁰ 5p ³	52 Te TELLURIUM [Kr] 4d ¹⁰ 5p ⁴	53 I IODINE [Kr] 4d ¹⁰ 5p ⁵	54 Xe XENON [Kr] 4d ¹⁰ 5p ⁶	
6	55 Cs CAESIUM [Xe] 6s ¹	56 Ba BARIUM [Xe] 6s ²	57 La LANTHANUM [Xe] 5d ¹ 6s ²	58 Ce CELIUM [Xe] 4f ¹ 5d ¹ 6s ²	59 Pr PRASEODYMIUM [Xe] 4f ³ 6s ²	60 Nd NEODYMIUM [Xe] 4f ⁴ 6s ²	61 Pm PROMETHIUM [Xe] 4f ⁵ 6s ²	62 Sm SAMARIUM [Xe] 4f ⁶ 6s ²	63 Eu EUROPIUM [Xe] 4f ⁷ 6s ²	64 Gd GADOLINIUM [Xe] 4f ⁷ 5d ¹ 6s ²	65 Tb TERBIUM [Xe] 4f ⁹ 6s ²	66 Dy DYSPROSIUM [Xe] 4f ¹⁰ 6s ²	67 Ho HOLMIUM [Xe] 4f ¹¹ 6s ²	68 Er ERBIUM [Xe] 4f ¹² 6s ²	69 Tm THULIUM [Xe] 4f ¹³ 6s ²	70 Yb Ytterbium [Xe] 4f ¹⁴ 6s ²	71 Lu LUTETIUM [Xe] 4f ¹⁴ 5d ¹ 6s ²		
7	87 Fr FRANCIUM [Rn] 7s ¹	88 Ra RADIUM [Rn] 7s ²	89 Ac ACTINIUM [Rn] 6d ¹ 7s ²	90 Th THORIUM [Rn] 6d ² 7s ²	91 Pa Protactinium [Rn] 5f ² 6d ¹ 7s ²	92 U URANIUM [Rn] 5f ³ 6d ¹ 7s ²	93 Np Neptunium [Rn] 5f ⁴ 6d ¹ 7s ²	94 Pu Plutonium [Rn] 5f ⁶ 7s ²	95 Am Americium [Rn] 5f ⁷ 7s ²	96 Cm Curium [Rn] 5f ⁷ 6d ¹ 7s ²	97 Bk Berkelium [Rn] 5f ⁹ 7s ²	98 Cf Californium [Rn] 5f ¹⁰ 7s ²	99 Es Einsteinium [Rn] 5f ¹¹ 7s ²	100 Fm Fermium [Rn] 5f ¹² 7s ²	101 Md Mendelevium [Rn] 5f ¹³ 7s ²	102 No Nobelium [Rn] 5f ¹⁴ 7s ²	103 Lr Lawrencium [Rn] 5f ¹⁴ 6d ¹ 7s ²		



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Atomic Number	13	26.982	Atomic Weight	
Density (g/ml)	2.702	1.81	Electro	
Atomic Radius	143	57.8	First Ionization Energy	
Melting Point C	2467.0	1825	Oxidation State	
Boiling Point			Year of Discovery	
Symbol	Al		Name	ALUMINIUM
Electron Structure	[Ne]3s ² 3p ¹		Crystal Structure	

Gases are shown in
 Solids are shown in
 Liquids are shown in
 Synthetic elements are shown in
 (*) indicates most stable isotope
 Radioactive elements are marked by ☛

58	140.116	59	140.908	60	144.24	61	(145.0)	62	150.36	63	151.964	64	157.25	65	158.93	66	162.5	67	164.93	68	167.26	69	168.934	70	173.04	71	174.967
67.73	1.12	6.77	1.13	7.007	1.14	6.475	1.15	7.54	1.17	8.269	1.17	7.895	1.17	8.27	1.21	8.536	1.2	8.54	1.23	7.895	1.24	9.321	1.25	9.68	1.21	9.5	1.21
182	527.4	182	523.2	181	529.6	183	535.3	180	543.3	208	564.7	186	531.1	183	527.0	184	529.0	182	527.0	186	527.0	187	527.0	188	527.0	189	527.0
Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
[Xe]4f ¹ 5d ¹ 6s ²	[Xe]4f ³ 6s ²	[Xe]4f ⁴ 6s ²	[Xe]4f ⁵ 6s ²	[Xe]4f ⁶ 6s ²	[Xe]4f ⁷ 6s ²	[Xe]4f ⁷ 5d ¹ 6s ²	[Xe]4f ⁹ 6s ²	[Xe]4f ¹⁰ 6s ²	[Xe]4f ¹¹ 6s ²	[Xe]4f ¹² 6s ²	[Xe]4f ¹³ 6s ²	[Xe]4f ¹⁴ 6s ²	[Xe]4f ¹⁴ 5d ¹ 6s ²	[Xe]4f ¹ 6s ²	[Xe]4f ² 6s ²	[Xe]4f ³ 6s ²	[Xe]4f ⁴ 6s ²	[Xe]4f ⁵ 6s ²	[Xe]4f ⁶ 6s ²	[Xe]4f ⁷ 6s ²	[Xe]4f ⁸ 6s ²	[Xe]4f ⁹ 6s ²	[Xe]4f ¹⁰ 6s ²	[Xe]4f ¹¹ 6s ²	[Xe]4f ¹² 6s ²	[Xe]4f ¹³ 6s ²	[Xe]4f ¹⁴ 6s ²
90	232.038	91	231.036	92	238.028	93	(237.0)	94	(244.0)	95	(243.0)	96	(247.0)	97	(247.0)	98	(251.0)	99	(252.0)	100	(257.0)	101	(258.0)	102	(259.0)	103	(182.0)
117.2	1.3	15.4	1.5	18.95	1.7	20.45	1.3	19.84	1.3	13.6	1.3	13.51	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	
179.0	587	163	580	154	594	155	597	159	587	173	585	173	578	174	578	174	578	174	578	174	578	174	578	174	578	174	
Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr
[Rn]7s ²	[Rn]5f ² 6d ¹ 7s ²	[Rn]5f ³ 6d ¹ 7s ²	[Rn]5f ⁴ 6d ¹ 7s ²	[Rn]5f ⁶ 7s ²	[Rn]5f ⁷ 7s ²	[Rn]5f ⁷ 6d ¹ 7s ²	[Rn]5f ⁹ 7s ²	[Rn]5f ¹⁰ 7s ²	[Rn]5f ¹¹ 7s ²	[Rn]5f ¹² 7s ²	[Rn]5f ¹³ 7s ²	[Rn]5f ¹⁴ 7s ²	[Rn]5f ¹⁴ 6d ¹ 7s ²	[Rn]7s ²	[Rn]5f ² 7s ²	[Rn]5f ³ 7s ²	[Rn]5f ⁴ 7s ²	[Rn]5f ⁵ 7s ²	[Rn]5f ⁶ 7s ²	[Rn]5f ⁷ 7s ²	[Rn]5f ⁸ 7s ²	[Rn]5f ⁹ 7s ²	[Rn]5f ¹⁰ 7s ²	[Rn]5f ¹¹ 7s ²	[Rn]5f ¹² 7s ²	[Rn]5f ¹³ 7s ²	[Rn]5f ¹⁴ 7s ²