

श्रीगे पर नदीयाँ प्रेम की सगाई जो गदगद तब dil hogaya Engin
 Ce Pr Nd Pm Sm Eu Gd Tb Dy Ho Er

कुम में भी लो
 Tm Yb Lu

They के पापा जो लोला Nepal में आग कम बीकिंगे cafe में बना रहे पक्का
 Th Pa U Np Pu Am Cm Bk Cf Es Fm

madam needles laasi.
 Md . No Lr .

Vertical Column $\rightarrow$ Group (18)
 Horizontal " $\rightarrow$ Period (7)

$\Rightarrow$ metal, non-metal, metalloids.



metalloids : (5)

Si (metalloid) As Sb Sn Te

metals : (78%) $\rightarrow$ s + d + f + p

non-metals $\rightarrow$ H + B | C | N | O | F

2 $\rightarrow$ 10
 10 $\rightarrow$ 18
 18 $\rightarrow$ 36
 36 $\rightarrow$ 54
 54 $\rightarrow$ 86
 86 $\rightarrow$ 118

1		
3		
11		
19		
37		
55	56	
87		

21							30
39							48
57 $\leftrightarrow$ 72							80
89 $\leftrightarrow$ 104							112

5				2	He2
13				10	Ne10
31				18	Ar18
49				36	Kr36
81				54	Xe54
113				86	Rn86
				118	Og118

58										71
90										103

↑
 leaving

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⇒ Factors affecting I.E.

① Z_{eff} . $L \rightarrow R : Z_{eff} \uparrow \therefore I.E. \uparrow$

I.E.: ${}_3Li < {}_4Be$

${}_5B < {}_6C$

① & ②

factor $\rightarrow 1^{\circ}$ factor

③ & ④

factor $\rightarrow 2^{\circ}$ factor

② Size

Top $\rightarrow Z_{eff} = \text{const.}$
↓
Bottom $\rightarrow \text{size} \uparrow \therefore I.E. \downarrow$

$\begin{matrix} Li \\ Na \\ K \\ Rb \\ Cs \end{matrix}$

↓ size ↑ : I.E. ↓

metallic character
 $m \rightarrow m+1 e^-$

Tendency of element to
lose e^- for form (ion
or cation)

metallic
character ↑

③

Electronic Configuration

$I.E. : N > O$

$2p^3 > 2p^4$

I.E. : $P > S$

$3p^3 > 3p^4$

stable EC

$(np^3 / np^6) (np^8, nd^{10})$

(nf^7, nf^{14})

$I.E. : W < O$
 $2p^2 < 2p^3$

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