

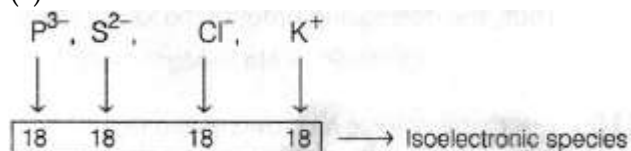
71 (1) Intermolecular distance between two elements H_2 molecule = 74pm

$$\text{Covalent radius} = \frac{1}{2} \times \text{length between two elements}$$

$$= \frac{1}{2} \times 74 = 37 \text{ pm}$$

72 (1) Ionic radii \propto screening effect $\propto \frac{1}{ENC}$ (Effective Nuclear Charge)

73. (3)



74 (1) First ionisation energy increases from left to right across a period.

75 (2) Ionisation energy of nitrogen is more than oxygen due to half filled p orbitals where interelectronic repulsion is minimum

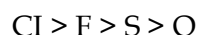
$$\text{interelectronic repulsion} \propto \frac{1}{\text{Ionisation energy}}$$

76 (1) Order of screening effect electrons in different orbital of a given shell is $s > p > d > f$

77 (2) Electron affinity \propto electron gain enthalpy

In periodic table chlorine has more electron affinity generally electron from left and right period.

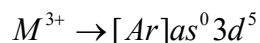
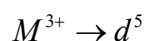
So, order of electron gain enthalpy is



78 (4) Al_2O_3 and As_2O_3 are amphoteric in nature Amphoteric oxides behave as acidic with base and basic with acids whereas neutral oxides

(CO, NO, N_2O) have no acidic or basic properties.

79 (1) 3d - subshell contains $5e^-$ as d^5



(Z) atomic number = 26

So, $M \rightarrow Fe$

80 (2) $x = ns^2 np^4, y = ns^1$

oxidation state of X = -2

Oxidation state = +1

Compound = y_2x or xy_2