

ELEMENTS OF D - BLOCK

ELECTRONIC CONFIGURATION



6000 BC

D-BLOCK BUT NOT TRANSITION

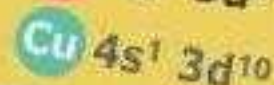
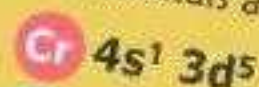
Zn Zinc, Cadmium and Mercury are d-block elements but not transition elements because of their completely filled d-orbitals

Cd

Hg

STABILITY MATTERS

Elements with half filled and fully filled orbitals are stable.



Sn

Pb

H

Cu

REACTION WITH ACIDS



These metals react with acids and release Hydrogen.

Copper doesn't react with acids because it is below Hydrogen in Electrochemical Series.



COLOUR OF COMPOUNDS

These compounds are coloured due to the presence of unpaired electrons in D-orbitals.



PARAMAGNETIC

They show magnetic properties due to presence of unpaired electrons.



OXIDATION STATE

These elements show variable oxidation states. (Fe^{+2} , Fe^{+3})



Osmium shows maximum +8 oxidation state.

HISTORY OF D - BLOCK

Our ancestors were so deeply attached to metals.

Stone Age - Man learned to fashion **Gold** into jewellery.

4200 BC



Started using **Copper** for weapons and utensils

4000 BC



Romans and Chinese started using **Silver** as currency

1500 BC



Iron Age - Started using Iron for tools and weapons.

2300-700 BC



Created Alloys by mixing two metals to increase strength and usability of metals