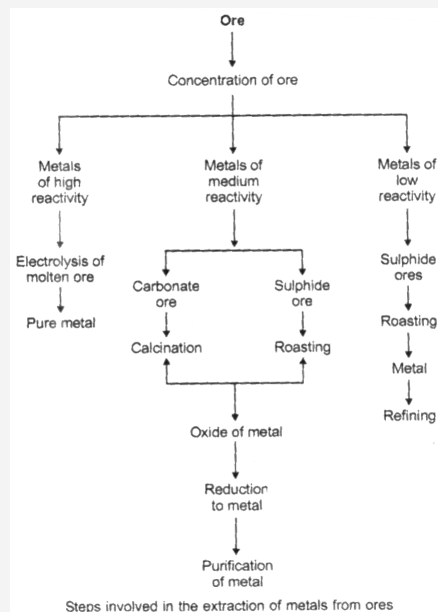


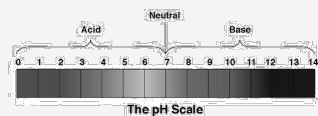
indicators

INDICATOR	ACIDS	BASES
phenolphthalein	colourless	pink
methyl orange	red	yellow
red litmus	red	blue
blue litmus	red	blue

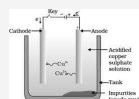
extraction of metals



ph



refining of metals



functional group

Hetero atom	Class of compounds	Formula of functional group
Cl/Br	Halo- (Chloro/bromo) alkane	-Cl/-Br (substitutes for hydrogen atom)
Oxygen	1. Alcohol	-OH
	2. Aldehyde	$\begin{matrix} H \\ \\ C=O \end{matrix}$
	3. Ketone	$\begin{matrix} & O \\ & \\ C-C \end{matrix}$
	4. Carboxylic acid	$\begin{matrix} O \\ \\ C-OH \end{matrix}$

reactivity series

K	Potassium	Most reactive Reactivity decreases Least reactive
Na	Sodium	
Ca	Calcium	
Mg	Magnesium	
Al	Aluminium	
Zn	Zinc	
Fe	Iron	
Pb	Lead	
H	Hydrogen	
Cu	Copper	
Hg	Mercury	
Ag	Silver	
Au	Gold	

alloy

ALLOY	COMPOSITION
brass	Cu + Zn
stainless steel	Fe + Ni + chromium
bronze	Cu + Sn copper, tin
solder	Pb + Sn lead, tin
amalgam	if any one is mercury