Level - 1	DTS-3

31.(D) Sodium is soluble in Mercury Alloys. They have less activity as compared to sodium.

32.(A) RbO_2 has Rb^+ & $O^{-1/2}$. $O^{-1/2}$ has one unpaired e^- in π^*2p orbital.

33.(A) $KHCO_3$ is more soluble than $NaHCO_3$

34.(C) $Na_2CO_3 \cdot 10H_2O \xrightarrow{\Delta} Na_2CO_3 + 10H_2O$

35.(A) Discharge potential of $H^+(aq) < Na^+(aq)$

36.(B) $LiAlH_4$ is strong H^- donor

37.(C) $NaHCO_3$ is very less soluble because the Lattice formed by HCO_3^- fits Na^+ perfectly. So its lattice energy becomes high. But lattice of $KHCO_3$ is not as stable.

38.(C) Ionic size and Atomic size increases down the group.

39.(B) Ionization potential/Energy decrease down the group.

40.(B) Metallic luster is caused by mobile e^-.

41.(C) Discharge potential of $H^+(aq) < Na^+(aq)$, using ordinary electrodes.

42.(B) Polarizing power $\propto \frac{1}{\text{size of cation}}$

43.(A) Only Li_2CO_3 is unstable.

44.(B) Only Li reacts with N_2 among alkali metals.

45.(B) $M \cdot P \propto$ Ionic strength.