

Exercise III

1) Peroxide and superoxide are, respectively:

diamagnetic and diamagnetic
paramagnetic and paramagnetic
diamagnetic and paramagnetic
paramagnetic and diamagnetic

2) Sodium-potassium alloys are used as:

an oxidizing agent
a reducing agent
a drying agent
a source of Na^+

3) The Downs process is used to produce:

NaCl and Cl_2
 NaOH and Cl_2
 Na and Cl_2
 NaCl and NaOH

4) You can dissolve 370 g of NaCl in one liter of water. Calculate the solubility product of NaCl .

5) Which of the following statements is true:

Li^+ has a lower hydration enthalpy than Na^+
 LiF is more soluble than NaCl
Fluoride has a higher solvation enthalpy than chloride.
 Li^+ is larger than Na^+

6) Which of the following salts should you better not eat: KCl , NaCl , LiCl , MgCl_2 , BeCl_2 , CaCl_2 ??

7) Which of the following compounds reacts with water: $\text{Ca}(\text{OH})_2$, CaH_2 , CaBr_2 or $\text{Ca}(\text{NO}_3)_2$?