**IN CLASS # 5**

1. Compute the theoretical density for sodium chloride (NaCl). The atomic weights of Na and Cl are 22.99 g/mol and 35.45 g/mol, respectively. The ionic radii of Na+ and Cl- are 0.102 and 0.181 nm, respectively. [NA=6.022×1023 atoms/mol]
2. Calculate the number of Schottky defects per cubic meter in KCl (potassium chloride) at 500°C. The energy required to form each Schottky defect is 2.6 eV. The density for KCl (at 500°C) is 1.955 g/cm3. The atomic weights of K and Cl are 39.10 g/mol and 35.45 g/mol, respectively.

(k=8.62×10-5 eV/K)

(N is the number of lattice sites per cubic meter)

 