**Task 2 (2+2+2+2+2 Point)**

Estimate the energy between the ground state and first excited state.

1. H atom (ER=13.6ev)
2. He+ ion
3. Vibrational energy of H2 molecule
4. Rotational energy of H2 molecule
5. Draw diagram of black body radiation uw(w,T) for T1<T2.