1. Prove that in Hydrogen atom, for n>>1, the frequency of the photon emitted from n-to-n-1 transition is the same as the rotational frequency of the electron.

2. What are the maximum and minimum wavelengths of light emitted from Balmer series?

3. When Hydrogen is excited by 12.2eV electrons, what are the possible wavelengths of the emitted photons?

4. If the life-time of the first excited state (n=2) in Hydrogen atom is 10^{-10}s, how many turns does an electron rotate before it drops down to the n=1 state?