General Physics B (II) **Mini-Test 10** May 24, 2022

Answers without **supporting work** or **necessary unit** will not be given full credit. If the meaning of the question isn't clear, please ask TA! You have **25mins** to complete this mini-test.

Q.1 **(a)** Using the Bohr model to calculate the radius of deuterium. (5 point) **(b)** If there's a deuterium atom was excited from ground state to the second excited state, what's the energy change of this deuterium. (5 point)

Q.2 An electron, which is in third excited state, is trapped in the 1D infinity potential well of width $L = 10^{-10}\ m$. **(a)** What is the probability that the electron can be detected in the left one-quarter of the well? (5 points) **(b)** If the electron is de-excited to first excited state by emitting a light, what is the wavelength of that light? (5 points)