Zewail City of Science and Technology

PEU Program, Fall 2018-19

PEU 450: Computational Physics

Homework 12

Due date: Thursday, Dec 19



- 1. Problem 10.1: obtain the energy eigenvalues for the odd parity solutions only using the shooting method. Compare with the exact solution. The code has the results for the even-parity solutions.
- 2. (10 points) Problem 10.2 using the shooting method.
- 3. Problem 10.7 using the shooting only for l = 0.
 - (a) (10 points) Obtain the two first eigenvalues.
 - (b) (10 points) Obtain the corresponding radial probability distributions and compare them with the exact results in one plot.