**PHYS 232**

**Assignment 5 due Monday April 6*,* 2020 at 10 am**

1. Submit your solutions of the following 2 problems on Ritaj by **Monday April 6*,* 2020 at 10 am**
2. Submit maximum 2 pages (one page per problem)
3. Label the files by your name + problem number:

SamirSalim1…etc….

1. What is the de Broglie wavelength (in meters) of an electron that has a kinetic energy of 4.00 $× 10^{-1}$ MeV? (25%)
2. What is the kinetic energy of an electron that has a de Broglie wavelength of 1.00$ × 10^{2} $Å? (25%)
3. What is the de Broglie wavelength (in meters) of a proton that has a kinetic energy of
4. 4.00 $× 10^{-1}$ MeV? (20%)
5. 1.00 $× 10^{3}$ MeV? (20%)

Give all your answers to 3 significant figures.

Note the correct scientific notation for significant figures:

$5.43 ×10^{12}$ NOT $54.3 ×10^{11} $ and NOT $0.543 ×10^{13}$ although all 3 expressions have the same value, but only the first one is the correct notation.

The number multiplying the powers of 10 must be between 1 and 10:

$$1\leq 5.43 <10$$

**+10%** for good hand-writing and clear and well-organized solutions.

**You are expected to work alone. Academic honesty is very important. Cheating will make you lose grades.**