PHYS 3220 - Spring 2019 – Exam 1
(due Tuesday February 12, 2019)

This is a take-home exam. You may consult your books or other reference material. You may not consult any other person about how to solve the problems in this exam. Your score based on the correctness of the solution and on the logic and clarity of your writing. Cite all sources you use. Sign the statement below and return it with your completed exam by the end of class Tuesday February 12, 2019.

1. (10 points) Exercise 1.66 (Force between two strips).

2. (10 points) Exercise 2.42 (E and ϕ for a cylinder).

3. (10 points) Exercise 3.50 (Attractive or repulsive?) [Note: the algebra is simpler if you let $r = xR$ and work with the numerical factor x].

4. (10 points) Exercise 4.41 (D-cell).

I affirm that I have had no conversation regarding how to solve the problems in this exam with any person, and I certify that the attached work represents my own thinking.

Signature: _____