

CNT 4419 Quiz 4/9/25 (20 minutes) NAME: \_\_\_\_\_

Instructions: Same standard instructions as before. As always, this quiz is closed everything, including phones and other students. Do not talk to another student during the quiz. Do not look at another student's answers during the quiz. Respond at the level of detail discussed in class.

1. [5 points] Write and briefly explain C code containing an integer-overflow vulnerability that results in an out-of-bounds read.

2. [2 points] At a high level, how are StackGuard and ASLR different from NX bits and CFI? What does this difference imply, for how attacks might proceed? [2-3 sentences]

3. [1.5 points] What are the 3 standard authentication factors? Provide an example of each. [1 sentence]

4. [1.5 points] Briefly explain polymorphic viruses, hitting all the main points discussed in class. [2-3 sentences]