

**Theory of Computation, CSCI 438 spring 2022**

**Pumping lemma for context-free languages, pages 123- 127, March 2**

1. Prove that  $L = \{a^n b^n c^n \mid n \geq 0\}$  is not context-free. (This is example 2.36, page 126, in the text.)

2. Use the pumping lemma to prove that the following is not context free.  
 $L = \{a^n b^m c^k : m > n, n > k \text{ and } m, n, k \geq 0\}$ .