

CS 411 - Artificial Intelligence I  
Fall 2019  
Assignment 9  
Department of Computer Science, University of Illinois at Chicago

Total Points: 25

1. Give precise definitions of following terms (for propositional logic):(5 x 2 = 10 )
  - a. Syntax
  - b. Semantics
  - c. Modus Ponens
  - d. Monotonicity
  - e. Proof by contradiction
  
2. Translate the following into propositional logic (5 x 1 = 5)
  - a. If Ana eats, Bret eats
  - b. Charles eats and Derek doesn't eat
  - c. Bret doesn't eat
  - d. If Derek doesn't eat at least one among Ana, Earl, and Fred eats
  - e. If at least one of Charles and Gary eats, Earl doesn't eat
  
3. Using these premises, deduce that Fred eats (10)