CSIC 4331/6331 August 27, 2018

Quiz 1

Name:

1. Let A and B be two events, if $A \implies B$ then $\neg B \implies$??
   a) Undetermined
   b) $\neg A$
   c) A
   d) $A \wedge B$

2. Let A and B be two events, if $A \implies B$ then $\neg A \implies$??
   a) Undetermined
   b) $\neg B$
   c) B
   d) $A \wedge B$

3. If $f(n) = 5n^3 + 3n^2 \log n + 4$ then
   a) $f(n) = O(n^4)$
   b) $f(n) = O(n^3)$
   c) $f(n) = \Omega(n^3)$
   d) All of the above

4. If $f(n) = 3n^2 + 5n - 6$ then
   a) $f(n) = o(n^2)$
   b) $f(n) = \omega(n)$
   c) $f(n) = O(n)$
   d) None of the above

5. Let d be the result of rolling a fair 6-sided die. What is $\Pr[d < 3 \vee d \text{ is odd}]$?
   a) 2/3
   b) 1/2
   c) 1/6
   d) None of the above

6. Let d be the result of rolling a fair 6-sided die. What is $\Pr[d < 3 | d \text{ is odd}]$?
   a) 2/3
   b) 1/2
   c) 1/3
   d) None of the above