

CS583 Spring 2009  
Quiz 06 Mar.25.09

Name: \_\_\_\_\_

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Show all work clearly and in order. Justify your answers whenever possible; You have 30 minutes to take this 10 point quiz.

- 1.** (10 points) Given an undirected graph  $G = \{V, E\}$  with unit edge weight, and a pair of vertices  $x \in V$  and  $y \in V$ . Design a linear-time algorithm that reports the number of *distinct shortest* paths from  $x$  to  $y$ . Please provide an intuition first.