

ICS 252–Discrete Structures

Quiz: 3

Section: 2

Time: 10 minutes

Name:

ID#:

Question 1: [3 marks] How many binary strings of length 9 that start with 0 or end with 101.

Question 2: [5 marks] How many binary strings of length 22 that contain

1. at least 3 and at most 6 1s?

2. at least 2 0s?

Question 3: [2 marks] Suppose we are choosing balls at random from a bag that contains 5 red, 7 blue and 8 white balls. What is the minimum number of balls that we have to choose from the bag in order to be sure that at least 4 balls have the same color?