COMPSCI 687 Pop Quiz 2

Name: _____

Instructions. This quiz is closed book and closed notes. You may not communicate with any other students or use any electronic devices. You have **5 minutes** to complete the quiz. As discussed in class, answers must be **perfect down to the symbol** to receive credit. Each question is graded as either correct or incorrect; there is no partial credit. **If your name is not legible, you will receive a 0 on the quiz.**

1. An MDP is a tuple (...). Fill in the "...", listing the symbols used in our definition of an MDP.

2. $\mathcal{S}$ is called the:

3. $\mathcal{A}$ is called the:

4. p is called the:

5. Give the definition of p. Your answer should be two lines. The first specifies the input and output sets (e.g., $f : \mathcal{X} \to \mathcal{Y}$) and the second should specify the function values (e.g., $f(x) = \Pr(X = x)$). You may omit the quantifiers (e.g., $\forall x \in \mathcal{X}$).

6. R is called the:

7. Give the definition of R. Your answer should be two lines. The first specifies the input and output sets (e.g., $f : \mathcal{X} \to \mathcal{Y}$) and the second should specify the function values (e.g., $f(x) = \Pr(X = x)$). You may omit the quantifiers (e.g., $\forall x \in \mathcal{X}$).

8. Give the definition of d_0. Your answer should be two lines. The first specifies the input and output sets (e.g., $f : \mathcal{X} \to \mathcal{Y}$) and the second should specify the function values (e.g., $f(x) = \Pr(X = x)$). You may omit the quantifiers (e.g., $\forall x \in \mathcal{X}$).