Name _____

CMPSCI 687 Pop Quiz 4

Instructions: This quiz is **closed** notes—do not use your notes or a laptop. Do not discuss problems with your neighbors until after everyone has handed in their quiz.

Note: Your answers should use math (equations), not English. Also, your answers should be the definitions given in class, **not** equalities (e.g., do not provide the Bellman equation in place of the definition of the state-value function).

1. Provide the definition of P used in class:

$$P(s, a, s') =$$

2. Provide the definition of d_0 used in class:

$$d_0(s) =$$

3. Provide the definition of R used in class:

$$R(s, a, s') =$$

4. Provide the definition of v^π used in class:

$$v^\pi(s) =$$

5. Provide the definition of J used in class:

$$J(\pi) =$$

6. Provide the definition of q^π used in class:

$$q^\pi(s, a) =$$

7. Provide the definition of the Bellman operator, $\mathcal{T}$, used in class:

$$\mathcal{T}v(s) =$$