The following are based on Chapter 35 of the textbook, on Approximation Algorithms.

1. (1 pt.)

   - This *quick check* is **closed book, notes, etc.**
   - You may use a *hand-written* 3 in. × 5 in. **reference card** as announced.
   - Use the **textbook's conventions** and terminology.

   Read the above carefully; then write your name below:

2. (3 pts.) The first page of the chapter includes the inequality

$$\max \left(\frac{C}{C^*}, \frac{C^*}{C} \right) \leq \rho(n)$$

   What do C, C^*, and $\rho(n)$ represent?

3. (3 pts.) Provide the formal definition of a *vertex cover* of a graph $G = (V, E)$.

4. (3 pts.) Provide the definition of the *set covering problem*.