REASONING

A robot's (Robbie's) K.B.:

\[
\{ \text{Robot(Robbie), Located-in(Robbie,Rochester,Curr-Time*),} \\
\quad \text{Dog(Snoopy), Person(Jack)}, \\
\quad (\forall x) \text{ Person}(x) \Rightarrow \neg \text{Robot}(x), \\
\quad (\forall x) \text{ Dog}(x) \Rightarrow \neg \text{Person}(x), \\
\quad (\forall x) \text{ Dog}(x) \Rightarrow \neg \text{Robot}(x) \} \\
\]

clause form: \(\neg \text{Person}(x) \lor \neg \text{Robot}(x)\)

**Question 1:** Are you a person? \(\text{Person}(\text{Robbie})\)?

**Reasoning:** \(\neg \text{Person}(x) \lor \neg \text{Robot}(x), \text{Robot}(\text{Robbie})\)

\(\neg \text{Person}(\text{Robbie})\), i.e., "No"

**Question 2:** Where are you?

\((\exists x) \text{Located-in(Robbie}, x, \text{Curr-Time*})\)?

**Reasoning:** Instantiate \(x\) to Rochester, i.e., "in Rochester"

**Question 3:** Is there a dog? \((\exists x) \text{Dog}(x)\)?

**Reasoning:** Instantiate \(x\) to Snoopy; i.e., "Yes, Snoopy"