Problem 2. Translate the each of following statements into symbolic notation by stating each prime sentence and using connectives. For example, “Carl is tall and Cindy is short” can be written as $P \land Q$, where $P = “Carl is tall”$ and $Q = “Cindy is short.”

(a) “If I am either tired or hungry, then I cannot study.”

(b) “If it is foggy tonight, then either John must stay home or he must take a taxi.”

(c) “If either the Cardinals or the Cubs lose and the Reds win, then the Brewers will be out of first place and, moreover, I will lose a bet with my friend Tony.”

(d) “The sum of two odd integers is an even integer.”