CSCI 281, Assignment 07 – Sets and Logic(15 points)

1. (5 points) Use truth tables to show $\neg(P \implies Q) \equiv P \wedge \neg Q$
2. (5 points) Express $P \implies Q$ using $\neg$ and $\vee$ but not $\implies$
   Hint: Use the result from Question 1.
3. (5 points) Write the contrapositive of the following statement: "If I study hard then I'll pass the test". Your answer should be an English sentence.