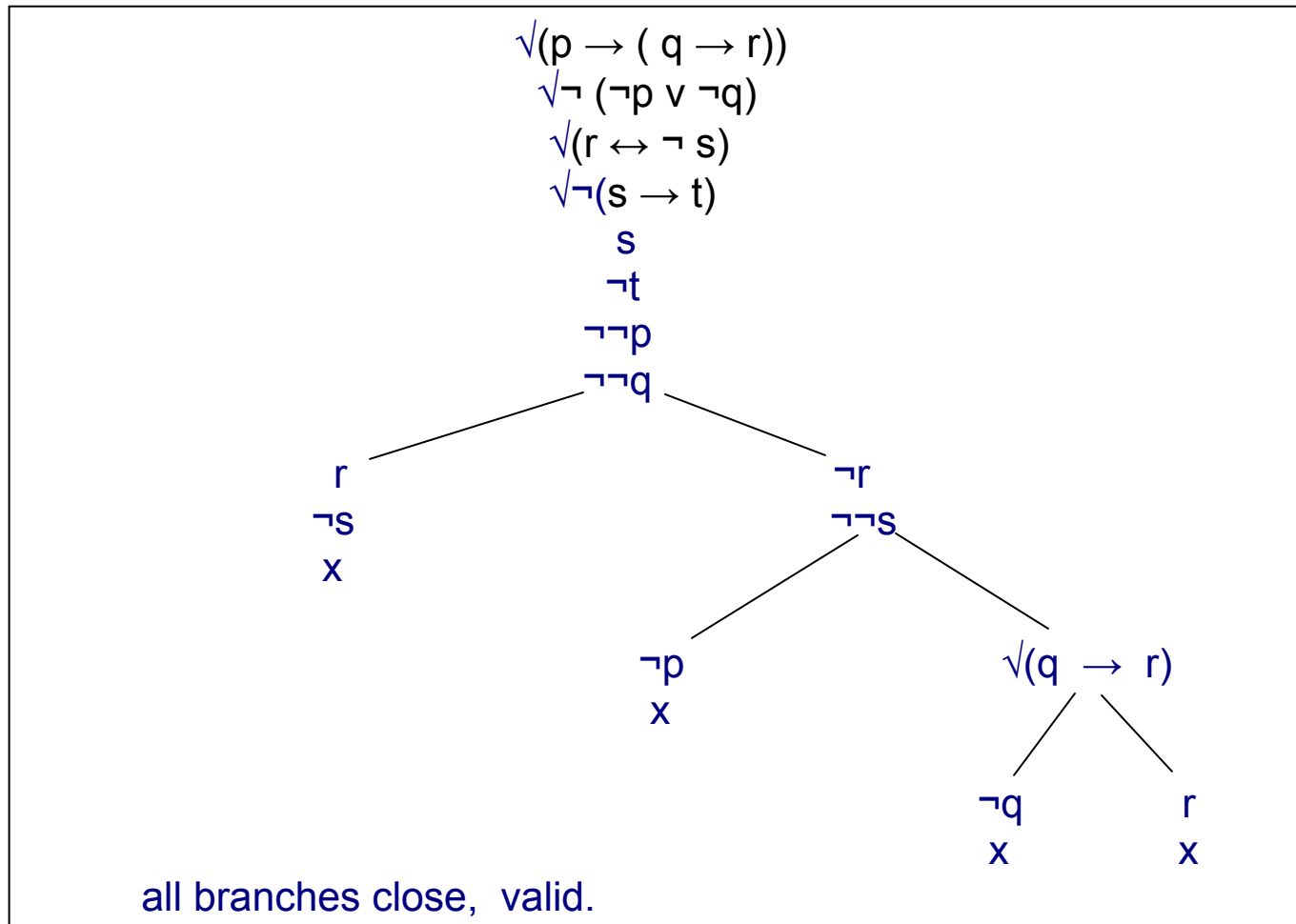


Test 4

1. Determine whether valid or invalid. $(p \rightarrow (q \rightarrow r)); \neg(\neg p \vee \neg q); (r \leftrightarrow \neg s) \therefore s \rightarrow t$



2. Use the truth tree method to determine whether the following sentence is a contradiction. (5 pts. $\neg([(p \leftrightarrow r) \& (r \leftrightarrow s)] \rightarrow (\neg s \leftrightarrow \neg p))$)

