Question 1: **(6 Marks) (Time 15 minutes)**
Use the principle of resolution to show that if the argument is valid or not with the

1.1 Premises $(p \wedge t) \rightarrow (r \vee s)$, $q \rightarrow (u \wedge t)$, $u \rightarrow p$, and $\neg s$ leads to the conclusion $q \rightarrow r$

1.2 Premises $(p \wedge t) \rightarrow r$, $q \rightarrow (u \vee t)$, $u \rightarrow p$, and $\neg s$ leads to the conclusion $q \rightarrow r$

1.3 Premises $p \rightarrow (s \vee q)$, $q \rightarrow (u \wedge t)$, $u \rightarrow p$, and $\neg s$ leads to the conclusion $q \rightarrow s$

1.4 Premises $t \rightarrow (r \wedge s)$, $q \rightarrow (u \wedge t)$, $u \rightarrow p$, and $\neg s$ leads to the conclusion $\neg q \rightarrow r$

1.5 Premises $(p \wedge t) \rightarrow (r \vee s)$, $q \rightarrow t$, $u \rightarrow p$, and $\neg s$ leads to the conclusion $s \rightarrow r$

Please note: You will do the solution in two steps.
In Step 1: you will find out the clauses
In Step 2: you will apply principle of resolution

I expect answer in the following format
Step 1: Your Answer

Step 2: Your Answer