

AI COURSE TUTORIALS: September 11, 2021

Instructions: Solve the problems given below using pen and paper. Write your name and roll number clearly on every page. Take a scan or picture and post in chat box

1. Solve the following problem using Propositional Logic using both Tree Method and Resolution Refutation:

Rajesh either took the bus or came by cycle to class. If he came by cycle or walked to class, he arrived late. Rajesh did not arrive late. Therefore, he took the bus to class.

2. Solve the following problems in Predicate Logic and Resolution Refutation:
 - a. Every passenger is either in first class or second class. Each passenger is in second class if and only if the passenger is not wealthy. Some passengers are wealthy. Not all passengers are wealthy. Therefore, some passengers are in second class.
 - b. Tony, Mike, and John belong to the Alpine Club. Every member of the Alpine Club is either a skier, or a mountain climber, or both. No mountain climber likes rain, and all skiers like snow. Mike dislikes whatever Tony likes and likes whatever Tony dislikes. Tony likes rain and snow. Is there a member of the Alpine Club who is a mountain climber but not a skier? **If so, who?**
 - c. No one respects a person who does not respect himself. No one will hire a person he does not respect. Therefore, a person who respects no one will never be hired by anybody.