Artificial Intelligence

Exercise #2

1- Consider the following facts

   a. Ali only likes easy courses.
   b. All Computing courses are hard.
   c. All Human courses are easy.
   d. "Discrete Mathematics" is a Computing course.
   e. "Sinai History "is a Human course.

   i- Create a set of predicate calculus expressions that represent the above statements.

   ii- Use unification and inference rules to answer the question: **What course would Ali like?**

2- Anyone passing his history exams and winning lottery is happy. But anyone who studies or lucky can pass all history exams. Omar did not study but he is lucky. Anyone who is lucky wins the lottery.

   a. Create a set of predicate calculus expressions that represent the above statements.
   b. Use unification and inference rules to answer the question: **is Omar happy**?

3- All people who are not poor and are smart are happy. Those people who read are smart. Enas can read and is not poor. Happy people have exciting lives.

   a. Create a set of predicate calculus expressions that represent the above statements.
   b. Use unification and inference rules to answer the question: **does Enas have exciting life?**

4- High temperature and disorientation indicate that a person has a fever. A person that has been exposed to measles and now has a red rash and a fever has the measles. When someone visits a person with measles he becomes exposed to measles. Nader has measles. Tames visited Nader. Tamer has a high temperature and is disoriented. Tamer has a red rash.

   a. Create a set of predicate calculus expressions that represent the above statements.
   b. Use unification and inference rules to answer the question: **does Tamer have measles?**