Question 1. Identify the thematic role of each NP in the following sentences:

a. John kissed Mary.
b. Mary was kissed by John.
c. The news that John kissed Mary surprised Bill.
d. Bill was surprised at the news that Mary was kissed by John.

Question 2. Indicate whether the following sentence are ambiguous. If yes, is it a structural ambiguity, lexical ambiguity, or both?

a. John hit the man with a bat.
b. John hit the man in the park.
c. In the park, the man was hit by John.
d. The man in the park was hit by John.
e. The man was hit by John in the park.

Question 3 (This exercise requires knowledge of elementary set theory.)

A. Suppose that the reference (meaning) of swims points out the set of individuals consisting of Anna, Lu, Paul, and Benjamin. For which of the following sentences are the truth conditions produced by Semantic Rule I met?

i. Anna swims.
ii. Jack swims.
iii. Benjamin swims.
Question 4 For the pair of sentences, indicate whether (a) implies, or entails (b). Assume that the same individual is referred to in each case where proper names/pronouns are repeated in a and b.

(1)   a. Adam is a syntactician who likes to draw phrase structure trees
      b. Adam is a linguist

(2)   a. Adam is a linguist who likes to draw phrase structure trees
      b. Adam is a syntactician