Homework 3: Practice Test 1

Two questions I am likely to ask:

1. State the Principle of Compositionality.

2. Explain briefly in your own words the following statement: “Restrictive relative clauses are semantically just like intersective adjectives.” (That requires saying something about how intersective adjectives work semantically – what kinds of meanings they have, and what they combine with and how.)

Sample logic translation problems.

3. Which of the following formulas, if any, gives a correct translation for the English sentence Every dog barks? (In all of these questions, there may be no correct translation, just one, or more than one.)
   a. $\forall x (\text{Dog}(x) \land \text{Bark}(x))$
   b. $\forall x (\text{Dog}(x) \rightarrow \text{Bark}(x))$
   c. $\exists x (\text{Dog}(x) \land \text{Bark}(x))$
   For the ones you consider incorrect, say why. One good way is to describe a state of affairs, or model, in which the wrong formula would be true where the English sentence would be false, or vice versa.

4. Which of the following formulas, if any, gives a correct translation for the English sentence If anyone smiles, everyone is happy? (Again: none, one, or more than one.) (Justification optional, but helpful.)
   a. $\forall x (\text{smile}(x) \rightarrow \forall y \text{happy}(y))$
   b. $\exists x \text{smile}(x) \rightarrow \forall y \text{happy}(y)$
   c. $\forall y \text{happy}(y)$

5. For each of the two interpretations of the ambiguous sentence Every critic liked some painting, tell which one of the two given formulas gives the correct translation. The two formulas: (i) $\forall x (\text{critic}(x) \rightarrow \exists y (\text{painting}(y) \land \text{like}(x, y)))$
   (ii) $\exists y (\text{painting}(y) \land \forall x (\text{critic}(x) \rightarrow \text{like}(x, y)))$
   The two interpretations:
   (a) There is some painting which all the critics liked.
   (b) Each of the critics liked at least one painting, not necessarily the same one.

Adjectives, relative clauses, possessives. Sample sorts of questions.

6. If you want to argue that alleged is non-subsective but not privative, what sorts of facts would you give as evidence?

7. Which of the following syntactic structures gives a better basis for a compositional semantic interpretation of a phrase like the boy who loves Mary? Describe informally
in one or two sentences how the compositional semantics works for the correct structure.

(i)  
\[
\begin{array}{c}
\text{NP} \\
\text{Det} \quad \text{CNP} \\
\text{the} \quad \text{CNP} \quad \text{REL} \\
\text{boy} \quad \text{who loves Mary}
\end{array}
\]

(ii)  
\[
\begin{array}{c}
\text{NP} \\
\text{NP} \quad \text{REL} \\
\text{Det} \quad \text{CNP} \quad \text{who loves Mary} \\
\text{the} \quad \text{boy}
\end{array}
\]

8. The possessive phrases Barbara's mother and Barbara's book illustrate an interesting puzzle of compositionality: where does the "possessive relation" come from? In two or three sentences, say something about how the difference in interpretation relates to the difference in the semantic type of the head noun.

The reading. One or two questions relating to the two readings, Larson 1995 and Partee 1995. (Note: For Partee 1995, I won't ask about anything beyond page 331 - we'll study the second half of the paper later.) Nothing too subtle or technical or tricky, but I do want to make sure you've read the assigned readings. For instance:

9. Larson (1995) treats determiners like some, every, no in a model-theoretic semantics as having interpretations of which of the following types? (i) truth values (ii) sets of entities (iii) binary relations on sets of entities.

10. Partee (1995) cites as two useful strategies in doing semantics Lewis's Advice and Cresswell's "Most Certain Principle". Which is which below?
   (i) "In order to say what a meaning is, we may first ask what a meaning does, and then find something that does that."
   (ii) "For two sentence \( \alpha \) and \( \beta \), if \( \alpha \) is true and \( \beta \) is false, \( \alpha \) and \( \beta \) must have different meanings."

**ANSWERS:** I'll put answers to most of these on the course website in a PDF document called "Answers to Practice Test 1.pdf". The course website is: http://people.umass.edu/partee/NZ_2006/NZ06_Ling_310.htm (Apparent spaces in that URL are really underlines: __.)