Semantics I/Introduction to Semantics – Fall 2009
Study Guide to test #2

The test will cover the issues discussed in class and in the reading assignments.
RECOMMENDATION: Do the relevant exercises in AAD and check your answers at the back of the book.

* There will be two parts. Part one will concentrate on applying the notions (around 70%).
Part two will require (short) discussions of the notions. See below a sample of questions. Please note that you need to use conventional terminology.
* There will also be an extra credit part (about 20%), where the questions will be about issues discussed in the previous part of the semester (see Study Guide to Test 1 for details).

I. Predicate Calculus

1. Be able to show familiarity with the notation of predicate logic and the universal & existential quantifiers. You may be given formulas in predicate logic and asked to give their idiomatic English equivalents, and vice versa. When translating English sentences into logical ones you will have to state the translation key.
**Example:** Mary does not dance.
**Key:** m = Mary, D = dance. **Translation:** ¬D(m)

2. Be able to show familiarity with the notion of scope (scope of negation and quantifiers).
*You may be given English sentences that contain negation and a quantifier and be asked to provide the logical formulae; or vice versa – you may be given logical formulae that contain negation and a universal or existential quantifier and be asked to translate them into idiomatic English.
**Do not forget** that (English) sentences with negation may have more than one reading, depending on the negation scope.
*You may be given English sentences that contain two quantifiers and be asked to provide the logical formulae; or vice versa – you may be given logical formulae that contain a universal and an existential quantifier and be asked to translate them into idiomatic English.
**Do not forget** that sentences with more than one quantifier may have more than one reading, depending on which quantifier has a wider scope.

II. Definite Descriptions

3. The definite article is discussed in Kearns Ch. 5; you are only required to be familiar with Russell’s analysis, which is discussed in section 5.1 (pp. 93-4).
Be able to discuss definite NPs and represent sentences within predicate logic according to Russell’s analysis of definite descriptions.

III. Modal Logic

4. Be able to distinguish between modal and non-modal sentences. You may be given sentences and be asked to determine whether or not they are modal. Or you may be asked to illustrate (non-) modal sentences.
5. Be able to distinguish between the different kinds of modality (logical = alethic, epistemic or deontic). You may be asked to determine the kind of modality of given sentences or illustrate the different kinds.
6. Be able to show familiarity with the notions of possible worlds, accessibility relation between worlds and closeness relation to an ideal (=preferable, better, perfectly obedience) world.
7. Show familiarity with the modal operators (the necessity and possibility operators). You may be asked to translate English sentences into formulas in propositional or predicate modal logic, and vice versa.
8. Be able to determine the truth-conditions of modal propositions.
9. Be able to work with scope negation, quantifiers and modal operators. You may be given English sentences which contain modal expressions as well as quantifiers and/or negation and be asked to translate them into modal logic, and vice versa.

IV. **Natural Language Quantifiers**

10. Show familiarity with the restricted quantifier notation. You may be given English sentences and be asked to give their formulas, using restricted quantifier notation; and vice versa.
11. Be able to give the set theoretic definitions for quantifier determiners in Generalized Quantifier Theory.
12. Be able to show/explain the difference between proportional and cardinal quantifiers.

A sample of short questions:
Answer/discuss TWO of the following questions/topics. Explain and illustrate. (Write 4-8 lines on each subject.)

1. Discuss ONE problem of propositional logic that is accounted for by predicate logic.
2. Scope
3. Proportional and cardinal quantifiers
4. Definite description according to Russell