Exercises for Reading 5

Section 1 – Distribution of Terms

1. What is the definition of *distribution*?
2. When we say that a term is distributed, what do we mean?
3. When a term is used universally, is it distributed or undistributed?
4. When a term is used particularly, is it distributed or undistributed?
5. Why is it easy to determine whether the subject term is distributed?
6. Tell whether the subject-terms and the predicate-terms in the following statemtns are distributed or undistributed:
    a. No cars are fast.   S: D or UnD   P: D or UnD
    b. Some omelettes are tasty.   S: D or UnD   P: D or UnD
    c. All wars are bloody.   S: D or UnD   P: D or UnD
    d. Some soldiers are not brave.   S: D or UnD   P: D or UnD

7. True or false
    a. T   F   The subject-term is distributed in statements whose quantity is universal.
    b. T   F   The subject-term is undistributed in statements whose quantity is universal.
    c. T   F   The subject-term in the E statement is undistributed.
    d. T   F   In the negative propositions, the predicate is always taken universally.

Section 2 - Obversion, Conversion, and Contraposition

1. What phrase do we use to indicate that two statements are logically the same?
2. Give the two step method for obverting a statement.
3. Change the quality of the following statements:
    a. All logic problems are difficult.
    b. No logic problems are difficult.
    c. Some logic problems are difficult.
    d. Some logical problems are not difficult.
4. How do you negate the predicate of a statement?
5. Negate the predicate in the following statements:
    a. All logic problems are difficult.
    b. No logic problems are difficult.
    c. Some logic problems are difficult.
    d. Some logic problems are difficult.
6. Which of the four categorical statements can be obverted?
7. Can you negate a predicate-term like *large* by replacing it with *small*? If not, explain why.

8. Obvert the following statements. When obverting the I statements, use any of the first three rules for the double-negated predicates:
   a. All logic problems are difficult.
   b. No logic problems are difficult.
   c. Some logic problems are difficult.
   d. Some logic problems are not difficult.
   e. Some men are strong.
9. What is the rule of double-negation?
10. Use the rule of double negation to convert these terms into another term that is logically equivalent:
    a. Not immortal   not non-white
    b. Immortal   non-white
    c. Mortal   white
    d. Logical   not non-animal
    e. Not not non-animal   not non-illogical
11. How to you convert a statement?
12. Convert the following statements. (Write N/A if the statement cannot be fully converted into its logical equivalent.)
    a. All logic problems are difficult.
    b. No logic problems are difficult.
    c. Some dogs are brown.
    d. All dogs are brown.
    e. Some dogs are not brown.
13. Partially convert the following A statements:
    a. All mammals breathe oxygen.
    b. All babies are loud.
    c. All oysters are quiet.
    d. All lobsters are angry.
    e. All geraniums are irrational.
14. Show each step in the process of contraposition for the following statement:
    a. All lobsters are angy.   Step 1:
                                     Step 2:
                                     Step 3:

15. Each of the statements on the right is logically equivalent to the statement to the left of it. Indicate whether the statement on the right is the obverse, the converse, or the contrapositive of the statement to the left of it (Use **O** for obverse, **C** for converse, and **CP** for contrapostitive.)
    a. All logic problems are difficult.   ____No logic problems are not difficult.
    b. No logic problems are difficult.   ____No difficult things are logic problems.
    c. Some logic problems are difficult.   ____Some difficult things are logic problems.
    d. Some logic problems are not difficult.____Some non-difficult things are logic problems.
    e. Some men are brave.   ____Some that are brave are men.

    f. Some men are not brave.   ___Some non-brave people are men.

16. True or False

    a. T   F   The three ways statements can be converted into their logical equivalents are by obversion, conversion, and subalternation.

    b. T   F   Obversion can be performed on all four kinds of statements.

    c. T   F   Conversion can be performed on O statements.

    d. T   F   There are only two steps involved in conversion.