Psychology 100 Lab Experiment on Lexical Decisions

## Instructions for Writing Your Lab Report

* Background: Before you begin writing your report, you should read the material on hemispheric specialization and language processing in the textbook. You should also read the background material by Springer and Deutsch (1998) and the research articles by Waldie and Mosley (2000) and Goldstein and Babkoff (2001).
* Your lab report should follow the outline below. Answer each question in a separate paragraph and use a number to identify each paragraph. The points available for each question are listed after the question. There are 50 points possible. Draw your graphs on the data sheet and use them in writing your report. Be sure to attach your individual data sheet to your report.
* Type your report in a single-spaced format with a 12-point font and 1-inch margins. Expected length = 2 to 3 single-spaced pages. Do not use a title page. Put your name and course section at the top of the first page, along with the title "Psychology 100 Lab Experiment on Lexical Decisions." Submit your report by the specified due date.

1. Our experiment used a “lexical decision” task – deciding whether a string of letters forms an English word – in order to explore brain hemisphere differences in word recognition. Based on the background readings noted above, describe the main hypothesis for this experiment. (5 points)

2. Every experiment involves at least one independent variable (a variable that gets manipulated) and at least one dependent variable (a variable that gets measured). Name and describe the two independent variables and the two dependent variables in this experiment and explain why each of them is an independent or dependent variable. *Hint: Look at your data sheet. (10 points)*

3. Describe the procedures this experiment used to present the stimuli and collect the behavioral responses from the participants. *Hint: If necessary, go back through the experiment again to help you remember the procedure, using Section 0.* (10 points)

4. Study the summary of results from this experiment. Using complete sentences, describe the pooled results for all the students who participated in this experiment (including the mean RT and PC values, as well as the t-value and p-value from the t-tests). Did the results support the hypothesis you described in item 1 above? Next, referring to the bar graph of pooled results in the bottom portion of your data sheet, and try to explain what the graph tells us about visual field differences (or hemispheric differences) in word recognition. Referring to the bar graph of your own results in the top portion of your data sheet, compare your own individual results to the pooled results. Describe how your results are similar or different from the pooled results. (15 points)

5. In your own words, describe and contrast the “direct access” model and the “relay” model of hemispheric specialization for language. Explain why both models would predict a right visual field advantage on our lexical decision task. (10 points)