## PSYCHOLOGY 281 ASSIGNMENT 1 Due: 15 May 2012

LAST NAME:	FIRST NAME:	ID:
LAST NAME:	FIRST NAME:	ID:
	INSTRUCTIONS:	

You may work on this assignment <u>singly</u> or in a <u>group of two people</u>. If you work in a group only turn in one assignment with the names and IDs of both students on it. Both members of a group receive the same grade.

Answer the questions in the space provide on this form. You may print off the form and fill in the answers by hand or open the form with a word processor and type your answers. If you write answers by hand your handwriting <u>must</u> be neat and legible. Whether you write answers by hand or type them, ensure that your answers actually make grammatical and syntactic sense. Failure to do so will be reflected in your grade... Also, be aware that **scientific writing should be succinct and to the point!** Rambling answers, sometimes called "shotgun answers", in which lots of material is provided, much of it irrelevant to the actual question at hand, will be penalized during grading.

Once completed, <u>staple</u> (no paperclips or binders) the pages together and turn the assignment in to the instructor by the end of class on 15 May; a 10% penalty will be applied immediately to any assignment not submitted by this time. An additional 10% late penalty will be applied each subsequent day (including weekends and holidays) at 12:00 PM (i.e., noon). Late (or early!) assignments must be submitted *directly* to the instructor, <u>or</u> may be turned in to office staff at the Department of Psychology office (BSP-217), who will date-stamp the assignment (hours of operation Monday–Friday 8:00-12:00 and 1:00-4:00).

This assignment is out of 15 points.

## QUESTIONS:

1. What is the chief virtue of matched sampling? (1 point)

2. It is not always possible to use an ABA design in a within-subject design. Why? (Note: this has nothing to do with issues of ethics.) (1 point)

3. In a <u>hypothetical</u> world where NOTHING changes, would learning be necessary, or could organisms manage with only evolved, innate behaviours? Explain your answer. (2 points)

4. A researcher studies maze learning in rats by running 50 rats through a maze, one at a time. She does this ten times. Then she computes the average time for all rats on each run and plots this on a graph. What sort of study is this? Why? (2 points)

5. A squirrel that was raised in captivity is given a nut. It takes the nut, runs over to a chair leg, digs furiously at the concrete floor, drops the nut on the floor where it was digging, turns around and kicks towards the nut, then pats the top of the nut, and runs off looking for another nut. This is, to say the least, a somewhat odd behaviour. Explain what you think is going on and provide a brief discussion of how you could test your hypothesis. (3 points)

6. What is sampling bias? How can it be reduced? Can it ever be eliminated entirely (if "no", why? if "yes", how?). (3 points)

7. Let's say we've got a critter that will randomly move about rapidly in low humidity, but will move slowly in high humidity, even stopping entirely if the humidity is very high. Using what we've discussed in class, explain this example of kinesis in terms of control system terminology. Feel free to use diagrams if that helps you out. (3 points)