COURSE: MSCI 3710 **Print Name:** _____

Exam 1 – B **Signature:** _____

Spring 2005 **Student ID#:** _____

INSTRUCTIONS:

- Please print your name and student ID number on this exam. Also, put your signature on this exam.
- On your scantron PRINT your name and exam version. To better protect your privacy also print your name on the backside of your scantron.
- You have 75 **minutes** to complete this exam. The exam is open book, open notes, and open mind. You may use any type of hand calculator but please show all your work on the exam and mark all answers on the scantron. Usage of cell phones, digital cameras, PDAs, and other communication devices is strictly prohibited.
- Many of the questions follow the format of those in Hawkes Learning Systems Business Statistics. The remaining questions are either based on the Excel assignments or use an HLSBS-like approach with problems nearly identical to those assigned in the textbook.
- Please DO NOT pull this exam apart. When you have completed the exam, please turn your scantron and exam booklet into your instructor, at the front desk.
- No cheating.
- Good luck and we wish you well on the exam.

Note: Whenever question(s) are connected you may be asked to assume a result (given a value) as an answer for the previous question but this result (value) may or may not be correct. The procedure is set in place to prevent you from losing points on a subsequent question because you made a mistake on some previous question/s.

Use the information given in the following paragraph to answer first four questions.

A potential buyer who is considering purchasing a franchise store believes that the average weekly revenue is less than $10,000. He obtains a random sample of weekly revenues from 10 stores and conducts a statistical analysis on the data using Excel, partial results of which are shown below.

t Test for Population Mean	
Number of Observations	10
Sample Standard Deviation	748.42
Sample Mean	9132.00
Ho: xxxxxx	Ha: xxxxxx
T*	xxxxxx
P[T ≤ T*]	0.0026
T Critical, α = 0.025	-2.2622

1. What is the null hypothesis for testing the potential buyer's belief?
   A. Ho: □ ≥ 10,000 *
   B. Ho: □ □10,000
   C. Ho: □ < 10,000
   D. Ho: □ > 10,000
   E. Ho: □ ≤ 10,000

2. What is the calculated test statistic to test the buyer's belief?
   A. – 1.833
   B. 0.0026
   C. 3.668
   D. – 2.262
   E. – 3.668 *

3. **Suppose** the calculated test statistic is **–1.85,** which one of the following would best describe the p-value for the test?
   A. $p > .1$
   B. $.05 < p \leq .10$
   C. $.025 < p \leq .05$ *
   D. $.01 < p \leq .025$
   E. $p \leq .01$

4. **Suppose** the p-value of the test is **0.03**. What is the conclusion of the test concerning the potential buyer's belief, conducted at the 0.05 significance level, and reason for the conclusion?
   A. Conclude there is insufficient evidence the average weekly revenue is less than $10,000 because the p-value is greater than the significance level.
   B. Conclude there is evidence the average weekly revenue is less than $10,000 because the p-value is greater than the significance level.
   C. Conclude there is evidence the average weekly revenue is less than $10,000 because the p-value is smaller than the significance level. *
   D. Conclude there is insufficient evidence the average weekly revenue is less than $10,000 because the p-value is smaller than the significance level.
   E. Conclude there is evidence the average weekly revenue is at least $10,000 because the test statistic is greater than the significance level.