**BF[1] - Decomposition**

**Type in your score here 🡪 \_\_24\_\_ out of 30 points possible**

1. (5 points) Ponder/Reflect Exercise – Reflect on what you have learned from this portion of the class. Examples of what you can do are: a brief outline of material covered, insights you gained from class or personal study, or items you feel that you need to follow up or work on. (3-5 sentences)

I have learned the way to decompose data and manually set up an ANOVA table. With doing this in R it is a lot easier to and not having to do it manually but it is nice to know how this is all working.

Note that problems 6-7 on p. 103 are based on the introductory paragraph labeled “The

bivariate BF[1] model."

2a. (3 Points) #6 on p. 103 in book

2b. (3 Points) #7 on p. 103 in book

Long day average, Overall average, Observed Value, Fitted Value, Chance Error Fitted Values

3. (4 points) #6 on page 103.In excel sheet.

4. (5 points) #8 on p. 103. Also give a p-value for the day length factor and give a conclusion.

If alpha was set at 0.05 we would reject the null hypothesis.

5. (3 points) #D21 on p. 180. Instead of calculating critical values, instead use your F-statistic for “Conditions" to calculate a p-value using R.

6. (3 points) #D24 on p. 181. Include an F-statistic and a p-value for the Group factor.

7. (4 points) What are the 4 assumptions about the error term in a basic factorial, 1 factor model: ? (this is a review question from chapter 2.2)

1) Error terms sum to zero

2) Variances or standard deviations are equal

3) The error are independent

4) The error are normally distributed

**DON’T FORGET TO SCORE YOUR HOMEWORK AT THE TOP**