**Quiz II-C**

Part I – Individual Quiz (Before Class)

Part II – Group Quiz (During Class)

1. What are the three basic principles of experimental design (3 pts)?

Random assignment, blocking, factorial crossing.

1. What were the four experimental designs covered in this section (3 pts)?

The One-Way Randomized Basic Factorial

Blocking and the one-Way complete Block

Factorial crossing and the Two-Way Basic Factorial Design

Randomized Two-Way Basic Factorial Experiment

1. When decomposing observed values, what is an observed number equal to (2 pts)?

Observed number = True Value + Residual error

1. What are the assumptions about the unknown true value (2 pts)?

The unknown true values are constant.

The pieces that go together to make the observed value are combined by adding them.

1. What are the assumptions about Residual Errors (2 pts)?

The average of the tickets in the box equals Zero.

All the errors are like draws from the Same error box, thus there is one typical size or standard deviation for all errors.

The errors are independent that is they are not related by any patterns.

The distribution of error sizes follows a Normal curve.

**End of Part I**

1. Were you in class on time (2 pts)?

Yes

1. Come up with an example of a One-way Randomized Basic Factorial Design (RBF [1]). (2 pts)

Having people use shapesplosion and tell them that it’s hard, easy or don’t tell them at all.

1. Come up with an example of a One-way Complete Block Design (CB [2]). (2 pts)

Use 4 different popcorn poppers and block by popper.

1. Come up with an example of a Two-way Basic Factorial Design (BF [2]) (2 pts)

A popcorn experiment with two factors (oil, salt) and 2 replications for each treatment.

1. Come up with an example of a Split Plot/Repeated Measures Design (SP/RM) (2 pts)

A piano teacher incorporates group lessons as a central component of her instruction. She has six groups of intermediate students that she will use to compare 2 group-study curriculum emphases (sight-reading emphasis vs. music-theory emphasis) and 2 individual-study systems (Bastian vs Faber).

Each group is assigned randomly to a curriculum emphasis.