One Way ANOVA

M1- Avg weight loss for the population following Low Cal Diet

M2-Avg weight loss for the population following Low Fat Diet

M3-Avg weight loss for the population following Low Carb Diet

Null: There is no significant difference in the avg weight loss w.r.t the three Diet Programs

Alter: There is a significant difference in the avg weight loss w.r.t the three Diet Programs

N=15 K=3

Level of Sign: Assume it at 5%

Levene Test p- value = 0.445 (>0.05)- Cannot Rejecting Null for Levene Test – Variances are equal

One Way ANOVA p-value = .013 (<0.05)- Reject the Null Hypo

Conclusion: There is a significant difference in the avg weight loss w.r.t the three Diet Programs

Two Way ANOVA – Without Replication

Dependent Var – Revenue

Factors – Room Type (Row Factor) City (Column Factor) r = 3; c= 4; n=rc=12

Null(Row): There is no sign diff in the avg revenue w.r.t three room types

Null(Column): There is no sign diff in the avg revenue w.r.t four cities

Level of Sign – Assume 5%

p-value (Room Type) = .008 (<0.05)-Rejecting Null (Row)

Conclusion: There is a sign diff in the avg revenue w.r.t three room types

p-value (City) = .001(0.05)-Rejecting Null (Column)

Conclusion: There is a sign diff in the avg revenue w.r.t four cities

Two – Way ANOVA with Replication

Dependent Var: Yield of Paddy

Factor: Type of Seed (Row); Type of Fertilizer (Column) r=3, c=4, rep=2, n=rc*rep=24

Level of Sign – 1%

Null(Row): There is no sign diff in the avg yield w.r.t three type of seeds

Null(Column): There is no sign diff in the avg yield w.r.t four type of fertilizers

Null(Interaction): There is no sign diff in the avg yield w.r.t the joint effect of the seed type and fertilizer type

p-value (Seed) = .000…(<.01), Reject Null(Row) – There is sign diff in avg yield w.r.t seed types

p-value (Fertilizer)= .001(<.01), Reject Null(Column)- There is sign diff in avg yield w.r.t fertilizer types

p-value(interaction)=.016(>.01), Cannot Reject Null(Interaction) – There is no sign diff in avg yield w.r.t the joint effect of seed types and fertilizer type