Name: Sulav Adhikari

Roll no: 23081003

Subject: Statistics II, Lab 6(Q15) (B. Sc. CSIT III Sem)

Section: ‘B’

Working expression:

**F =** 𝑴𝑺𝑻

**T**

𝑴𝑺𝑬

**F =** 𝑴𝑺𝑩

**B**

𝑴𝑺𝑬

**MST =** 𝑺𝑺𝑻

𝒂 −𝟏

**MSB =** 𝑺𝑺𝑩

𝒃−𝟏

**MSE=** 𝑺𝑺𝑬 (𝒂−𝟏)(𝒃−𝟏)

Working procedure:

Define Blocks, treatments and values in variable view → Assign type as numeric for blocks, string for treatments and numeric for values → Assign width 8,24,8 for block, treatment and values→ Assign measure scale for blocks, nominal for treatments and scale for values → Insert data in data view → Analyze → General linear model → Univariate → Put values in the dependent variable → Put block and treatment in fixed factors → Click model → Go to custom → Block and treatment in factor and covariates send to model → Type main effects → Sum of square type III → continue → click post Hoc → Send block and treatments in factors in Post Hoc tests for → click LSD → continue → ok → Copy only ANOVA table in word file.

SPSS Output:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Tests of Between-Subjects Effects** | | | | | |
| Dependent Variable: value | | | | | |
| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
| Corrected Model | 22.750a | 5 | 4.550 | 1.071 | .459 |
| Intercept | 816.750 | 1 | 816.750 | 192.176 | .000 |
| block | 16.250 | 3 | 5.417 | 1.275 | .365 |
| treatment | 6.500 | 2 | 3.250 | .765 | .506 |
| Error | 25.500 | 6 | 4.250 |  |  |
| Total | 865.000 | 12 |  |  |  |
| Corrected Total | 48.250 | 11 |  |  |  |
| a. R Squared = .472 (Adjusted R Squared = .031) | | | | | |

**Testing procedure**

**Setting up hypothesis:**

H0: There is no significant difference between treatments and blocks.

H1: There is a significant difference between treatments and blocks.

Level of significance:

α=0.05

Decision:

For treatment, p = 0.506 >α = 0.05, Hence we accept H0 and H1 is rejected

For block, p = 0.365> α = 0.05, Hence we accept H0 and H1 is rejected

Conclusion:

Hence, we conclude that there is no significant difference between treatments and blocks.

Name: Samir Shakya

Roll no: 23081025

Subject: Statistics II, Lab 1(Q15) (Bsc. CSIT III Sem)

Section: ‘B’

Working expression:

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**T**

𝑴𝑺𝑬

**F =** 𝑴𝑺𝑩

**B**

𝑴𝑺𝑬

**MST =** 𝑺𝑺𝑻

𝒂 −𝟏

**MSB =** 𝑺𝑺𝑩

𝒃−𝟏

**MSE=** 𝑺𝑺𝑬 (𝒂−𝟏)(𝒃−𝟏)

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Name: Samir Shakya

Roll no: 23081025

Subject: Statistics II, Lab 1(Q15) (Bsc. CSIT III Sem)

Section: ‘B’

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