Salahaddin University – Erbil **Subject:** Experimental Design

College of Agricultural Engineering Sciences **Stage:** Third

Department of Plant Protection **Date:** 2021-2022

**Question Bank - 2021-2022**

**Q1\** 1. What is the difference between CRD and RCBD?

2. What is advantage of RCBD?

**Q2\** The experiment was conducted using CRD to evaluate the effect of four different levels of Nitrogen (0, 25, 50 and 100 ppm) on the plants height (cm) during first growth period.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Treatment | *Level of Nitrogen (cm)* | | | | |
| T1 | 8 | 10 | 7 |  |  |
| T2 | 10 | 14 | 11 | 11 | 13 |
| T3 | 14 | 15 | 16 | 18 |  |
| T4 | 22 | 20 | 18 |  |  |

**A)** Complete the ANOVA table? **SS Total = 272.4 F Tab. = 5.82**

**B)** Discuss the result?

**Q3\** Complete this table if you have the following data **r=3** and **F Tab. 0.05 = 4.07**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S.O.V.** | **dF** | **SS** | **MS** | **F Cal.** | **F Tab. (0.05)** |
| Treatment | 3 | --- | 40 | 4.2 | --- |
| Error | --- | --- | --- |  |  |
| Total | --- | -- |  |  |  |

1. How many treatments used in this experiment?
2. Discuss the result?

**Q4\** Find the ANOVA table using RCBD and is there any differences among

treatments using Duncan Test?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Treatment | Replications | | | |
| T1 | 5 | 6 | 4 | 6 |
| T2 | 6 | 6 | 7 | 8 |
| T3 | 9 | 10 | 8 | 10 |
| T4 | 10 | 12 | 10 | 14 |

**Note: SS Total = 110.43 F tab. = 3.44**

**S.S.R. = 3.14 , 3.20 , 3.25**

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