

Roll No.:

SGT UNIVERSITY**END TERM THEORY EXAMINATION JULY - 2022**

Faculty/College of Study:	Agricultural Sciences	Year/Semester:	2 nd Semester
Program:	M.Sc. Agriculture (Common for All Specialities)	Duration:	02:00 Hrs.
Course/Subject:	Experimental Designs	Maximum Marks:	40
Course/Subject Code:	11060203	Batch:	2020 & 2021

Instructions: -

1. Write Your Roll No. on the Question Paper.
2. Candidate should ensure that they have been provided correct question paper. Complaint(s) in this regard, if any should be made within 15 minutes of the commencement of the exam. No complaint(s) will be entertained thereafter.
3. All Questions are compulsory. Marks are indicated against each question.
4. Illustrate your answer with diagram wherever required.

SECTION-A**(Very Short Answer Type Questions)****Note: All Questions are compulsory: -****[10X1=10]**

S. No.	Question	Marks Allotted
1	Write about the term referring to the amount of balancing, blocking and grouping the experimental units.	1
2	Number of treatments in a latin square design should be a	1
3	The null hypothesis in a completely randomized design is H_0 :.....	1
4	Who is known as the father of experimental design?	1
5	Each main plot is divided into subplots depending on the number of _____.	1
6	What is confounding?	1
7	What two pieces of information are needed to determine the critical value of F-test in ANOVA ?	1
8	Name the types of Bioassay experiments.	1
9	Write the maximum possible number of orthogonal contrasts among five treatments.	1
10	What statistical procedure is used to assess the statistical significance of the main effects and the interaction(s) in a factorial design?	1

SECTION-B
(Short Answer Type Questions)

Note: All Questions are compulsory: -

[3X2=6]

S. No.	Question	Marks Allotted
11	Explain BIBD.	2
12	Construct a layout for the Latin Square design if five treatments A, B, C, D and E are involved in the experiment	2
13	Define Bio-assays and their types.	2

SECTION-C
(Descriptive Answer Type Questions)

Note: All Questions are compulsory: -

[3X4=12]

S. No.	Question	Marks Allotted
14	Explain about transformations and their uses?	4
15	Write the assumptions of Analysis of Variance Model	4
16	Define uniformity trials? How it is used for deciding shape and size of plots?	4

SECTION-D
(Long Answer Type Questions)

Note: All Questions are compulsory: -

[2X6=12]

S. No.	Question	Marks Allotted
17	What is experimental design? Explain the three basic principal of experimental design in detail.	6
18	Explain about I. symmetrical and asymmetrical Factorial II. Orthogonality III. Critical Difference	6