P P SAVANI UNIVERSITY

Second Semester of B.Sc. (Hons.) Agriculture End Semester Examination

December - 2022

SGAG 1060–Statistical Methods

14.12.2022, Wednesday Time: 10:00 a.m. to 12:00 a.m. Maximum Marks: 50

Instruction:

1. Draw a neat and labeled diagram whenever it is required.
2. Start new questions from new page.

			CO	BTL
Q.1	**Multiple choice questions (01mark each)**	**(15)**		
1.1	Statistics is a science of estimate and probability definition given by...		1	1
	a. Boddington	c. R. A. Fisher		
	b. Boggington	d. R. M. Fisher		
1.2	The study of the population always on the basis of....		1	1
	a. Individual	c. Variability		
	b. Sample	d. Diagram		
1.3	In which, data are classified and tabulated according to three characteristics?		1	2
	a. Simple	c. Three way		
	b. Two way	d. Manifold		
1.4	Correlation coefficient lies between - 1 to + 1		2	3
	a. 0 to + 1	c. - 2 to + 2		
	b. - 1 to + 1	d. $-\infty$ and $+\infty$		
1.5	Which method of the frequency distribution have example of class range like 100-199, 200-299.....?		2	3
	a. Exclusive Method	c. Both A and B		
	b. Inclusive Method	d. None of the above		
1.6	The most common and ideal measure of central tendency is...		2	1
	a. Arithmetic Mean	c. Mode		
	b. Median	d. Modal		
1.7	In which experiment design layout of the design is easy?		1	1
	a. LSD	c. CRD		
	b. RBD	d. FRBD		
1.8	When the principles of statistics are applied on living thing or organisms known as...		1	2
	a. Biography	c. Bibliography		
	b. Biology	d. Biometry		
1.9	Statistical model of RBD is....		2	4
	a. $Yij = \mu + \tau\iota + \beta j + \varepsilon ij$	c. $Yij = \mu + \varepsilon ij$		
	b. $Yij = \mu + \tau i + \varepsilon ij$	d. $Yij = \tau i + \varepsilon ij$		

1.10	The formula for the replication degree of freedom in RBD is....		**1**	**3**
	a. r-3	c. r-1		
	b. r-4	d. r-2		
1.11	Among the below give the example of continuous variable...		**1**	**1**
	a. Length, Width	c. Width, Color		
	b. Length, Color	d. Color, No. of petals		
1.12	The manner in which the frequency are distributed over the different class is....		**1**	**1**
	a. Frequency	c. Class tabulation		
	b. Class over	d. Frequency distribution		
1.13	Select the symbol for the general mean in statistical model.		**2**	**2**
	a. μ	c. ε		
	b. τ	d. $		
1.14	In moderately skewed distribution, Mean-Mode =		**2**	**2**
	a. 4(Mean-Median)	c. 3(Mean-Median)		
	b. 2(Median- Mean)	d. Mean-Median		
1.15	Which design is useful only under the laboratory condition?		**1**	**1**
	a. CRD	c. LSD		
	b. RBD	d. FRBD		

Q.2	**Define/ Explain (Attempt any six- 01 marks each)**	**(06)**	
2.1	Biometry	**1**	**1**
2.2	Randomization	**1**	**1**
2.3	Frequency distribution	**1**	**1**
2.4	Exclusive Method	**1**	**1**
2.5	Tabulation	**1**	**1**
2.6	Central Tendency	**2**	**1**

Q.3	**True/False (1 mark each)**	**(05)**	
3.1	Statistical results are true only on an average.	**2**	**2**
3.2	Regression is the two way relationship.	**2**	**2**
3.3	Correlation coefficient lies between - 1 to + 1.	**2**	**2**
3.4	K = 1 + 3.322 Log N is the Fisher's Rule.	**1**	**2**
3.5	Tabulation is the process of presentation of data.	**2**	**2**

Q.4	**Short notes (Attempt any six- 02 marks each)**	**(12)**		
4.1	Explain difference between frequency polygon and frequency curve.		**2**	**4**
4.2	Give the difference between Correlation and Regression.		**2**	**4**
4.3	How the error can be reduced?		**2**	**1**
4.4	List out the types of classification		**2**	**1**
4.5	Give the functions of replication		**2**	**1**
4.6	Differentiate the RBD and LSD		**2**	**4**
4.7	Limitation of statistics in agriculture		**2**	**1**
4.8	List out objectives of the central tendency		**2**	**1**
Q.5	**Answer the following questions in detail (Attempt any three- 04 marks each)**	**(12)**		
5.1	What is statistics? Explain its' aim and importance in agriculture.		**1**	**1**
5.2	Write down the any five full form related to the statistics.		**1**	**1**
5.3	Write down the advantage and disadvantage of RBD design.		**2**	**1**
5.4	Describe the principles of experimental design.		**1**	**1**
5.5	Explain the analysis of variance.		**1**	**1**

CO : Course Outcome Number **BTL** : Blooms Taxonomy Level

Level of Bloom's Revised Taxonomy in Assessment

1: Remember	2: Understand	3: Apply
4: Analyze	5: Evaluate	6: Create

***