Roll No. | | | | | | | | | | | | **Total No. of Pages : 02**

Total No. of Questions : 09

B.Sc. (Hons.) (Agriculture) (Sem.–3)

STATISTICAL METHODS

Subject Code : BSAG-308-19

M.Code : 78663

Date of Examination : 04-01-2023

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1. Write briefly :

a. Frequency polygon

b. Ogive

c. Dispersion

d. Range

e. Mutually exclusive events

f. Multiplication theorem of probability

g. Rank correlation

h. Complete enumeration

i. Stratified sampling

j. Find mode for the following:

8,10,5,8,12,7,8,9,11,8,7

SECTION-B

2. What is meant by Central Tendency? Explain **any one** measure of Central tendency with its merits and demerits.

3. A bag contains 10 white and 5 black balls. Two balls are drawn at random one after the other without replacement. Find the probability that both balls drawn are black.

4. The probability of a defective bolt is 3%. Find (i) mean (ii) standard deviation (iii) moment coefficient of skewness and (iv) moment coefficient of kurtosis in a total of 50 packets.

5. Explain properties of coefficient of correlation.

6. List the Non-probability sampling techniques and discuss any two with their merits and demerits.

SECTION-C

7. Define Statistics. How statistics can be applied in agriculture, explain by giving suitable example?

8. Two investigators study the income of group of persons using the method of sampling.

Following results were obtained by them :

Investigator	**Poor**	**Middle Class**	**Well-to-do**	**Total**
A	160	30	10	200
B	140	120	40	300
Total	**300**	**150**	**50**	**500**

Show that the sampling technique of at least one of the investigator is suspected.

(Given that the value of Chi square at two degree of freedom at 5% level of significance is 5.9 91)

9. Write a note on :

a) ANOVA

b) t-test.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.