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

Total No. of Questions: 09

B.Sc. (BT) (Sem. – 2)

BIOSTATISTICS

Subject Code: BSBT-203-18

M Code: 75874

Date of Examination : 17-12-2022

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. Answer the following:

   a) What is random sampling?

   b) Significance of graphical representation of data.

   c) What is Frequency Curve?

   d) What is the measure of precision?

   e) Difference between correlation and regression.

   f) What do you understand by Poisson distribution?

   g) Properties of Regression co-efficients.

   h) Define Randomized Block Design.

   i) What do you mean by Polynomial filling?

   j) Define Derivative Curves.

SECTION-B

2. What is Normal Distribution? What are the main properties of normal distribution?

3. State the different methods of finding out the correlation.

4. Calculate Karl Pearson Correlation co-efficient from the following data.

X	77	54	27	52	14	35	90	25	56	60
Y	35	58	60	40	50	40	35	56	34	42

5. In a sample of 8 observations, the sum of the squared deviations of items from their mean was 94.5. In another sample of 10 observations, the value was found to be 101.7. Test whether the difference is significant at 5% level of significance. It is given that at 5% level of significance critical value of F for $v_1 = 7$ and $v_2 = 9$ degrees of freedom is3.29 and for $v_1 = 8, v_2 = 10$df is 3.07.

6. Explain Fourier Transformation.

SECTION-C

7. Set up an analysis of variance table for the following per acre production data for three varieties of wheat, each grown on 4 plots and state if the variety differences are significant.

Plot of Land	**Per acre production data Variety of Wheat**		
	Variety of Wheat		
	A	**B**	**C**
1	6	5	5
2	7	5	4
3	3	3	3
4	8	7	4

8. Explain Completely Randomized and Randomized Block Design.

9. Find the Inverse of Matrix A:

$$A = \begin{matrix} 1 & 1 & 3 \\ 1 & 3 & -3 \\ -2 & -4 & -4 \end{matrix}$$

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