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RNLKWC/B.Sc.-CBCS/VS/BOT/H/DSE1T/22

2022

BOTANY

[HONOURS]

(CBCS)

(B.Sc. Fifth Semester End Examinations-2022)

PAPER-DSE1T

[Biostatistics]

Full Marks: 40

Time: 02 Hrs

*The figures in the right hand margin indicate marks
Candidates are required to give their answers in their own words as
far as practicable
Illustrate the answers wherever necessary*

Group - A

1. **Answer any five of the following:** **5x2=10**
- a) What is unbiased sampling?
 - b) Write down the relationship among mean, mode and median.
 - c) What is null hypothesis?
 - d) Define degree of Freedom.
 - e) Mention few similarities between Correlation and regression.
 - f) What is Type 2 error?
 - g) Write two applications of Student's t test?

(2)

Group – B

2. Answer any four of the following: **4x5=20**

- a) Calculate the mean | mode and median of the following sample –

Class	130-	135-	140-	145-	150-	155-	160-
	134	139	144	149	154	159	164
frequency	5	15	18	24	17	10	11

2+3

- b) What is sampling? Classify it? Compare between Cluster sampling and Random Sampling? **1+2+2**
- c) What is Root-Mean Square? Discuss merits and demerits of mean. **1+3**
- d) Discuss properties of t distribution? How does it differ from normal distribution? **3+2**
- e) Classify measures of dispersion? Explain Quartile Deviation? **2+3**
- f) Represent the following data by a pie chart. **5**

The following table gives the number of different fruits kept in a box.

Types of fruits	Mangoes	Apples	Oranges	Coconuts	Guava
Number	26	30	21	5	6

(3)

Group – C

3. Answer any one of the followings: **1x10=10**

- a) Discuss different methods of data collection? Explain advantages and disadvantages of mean deviation. What is sampling and non-sampling error? **4+4+2=10**
- b) Define correlation coefficient? Give one example of negative correlation?

Find out whether or not there is a significant correlation between the height of plants and the number of branches, using the following data:

Plant	1	2	3	4	5	6	7	8	9	10
Height	8	22	35	19	23	13	2	14	11	25
No. Of branches	29	48	55	49	53	41	22	38	35	48

2+2+6 = 10