

**Botany [Honours]
[CBCS]**

B.Sc. Fifth Semester End Examination-2023

(Regular & Supplementary Paper)

**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 questions of the following: 5x2= 10**
- a) What is cluster sampling?
 - b) Mention dissimilarities between correlation and regression.
 - c) Distinguish between variable and variate?
 - d) What are the measures of dispersion?
 - e) Define alternative hypothesis.
 - f) What is coefficient of correlation?
 - g) Write two application of Student's t-test.
 - h) What is Regression line?

(2)

Group B

2. Answer any FOUR questions of the following: 4x5 = 20

a) In an investigation, the total crop production is noted in the above mentioned table . Make a simple bar diagram from the data.

Years	Rice (tons)	Wheat (tons)	Maize (tons)	Total (tons)
1993-94	1500	500	200	2200
1994-95	1700	800	400	2900
1995-96	1900	900	700	3500
1996-97	2100	1100	900	4200

- b) Describe different types of correlation.
- c) Define median and mode with example. What is standard deviation?
- d) Write down the merits and demerits of median and mode.
- e) Calculate the mean and standard deviation from the data.

No.of seeds/fruit.

12, 14, 13, 6, 7, 21, 17, 15, 13, 12, 7, 8, 11, 20, 11, 19, 18, 9, 10,
13, 13, 15, 12, 14, 13, 11, 9, 8, 16, 14, 18, 9, 10, 16, 15, 16, 10,
10, 13, 11, 14, 12, 14, 13, 14, 15, 12, & 17

f) The following data is observed in case of a plant.

No. of seeds/pod 1 1 2 5 4 6 3 2 3 4

Length of pod 21.5 24.5 5 7 4 3 3 4.5

Calculate the correlation coefficient.

(3)

Group C

3. Answer any ONE question of the following: 1x10 = 10

a) i) Following number of seeds with the associated character is observed. Test the goodness of fit and comment.

Yellow seed: 128

Red seed: 108

ii) Discuss the application of chi square test

iii) What is negative correlation.

b) What are the methods of sampling? What are the criteria of good sampling? Describe the merits and demerits of Mode and median.

4+2+4
