(NO. OF PAGES: 2)

(FOR THE CANDIDATES ADMITTED
DURING THE ACADEMIC YEAR 2023 ONLY)

23UBY510

REG.NO. :

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI

END-OF-SEMESTER EXAMINATIONS : NOVEMBER-2025

B.Sc. -BOTANY **MAXIMUM MARKS: 75**

SEMESTER: V **TIME : 3 HOURS**

PART - III
BIOSTATISTICS

SECTION – A (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.
MULTIPLE CHOICE QUESTIONS. (K1)

1. Which of the following is an example of primary data?
   a) Census data b) Survey responses c) Government reports d) Literature reviews.

2. Which method is commonly used for presenting continuous data?
   a) Pie chart b) Histogram c) Line diagram d) Table

3. Choose the coefficient of variation , If the standard deviation of a data is 820 and mean of the data is 50, find the coefficient of variation_____.
   a) 16.4 b) 164 c) 1640 d) 1.64

4. Binomial Distribution is a _____
   a) Continuous distribution b) Discrete distribution
   c) Irregular distribution d) Not a Probability distribution

5. How would you use the drop- down menus in SPSS to generate a frequency table?
   a) Open the Output Viewer and Click save As, Pie Chart
   b) Click on: Analysis; Descriptive Statistics; Frequencies
   c) Click on: Graphs; ; Frequencies ; Pearson
   d) Open the Variable Viewer and recode the value labels.

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES. (K2)

6. Define tabulation.
7. Discuss the applications of Pie diagram.
8. Predict in a dataset with the values {2, 4, 4, 6, 8}, what is the mode?
9. Interpret Characteristics of Normal distribution data.
10. Define ‘t’ test.

SECTION – B (5 X 5 = 25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K3)

11. a) List the applications and scop of Biostatistics.

(OR)

b) In a culture of Drosophila ,there are 55 females and 44 males. Express the values in ratio , proportion and percentage**.**

(CONTD…….2)

12.a) Write about general guidelines for drawing diagrams and graphs.

(OR)

b) State the rules that serve as a guide in tabulating statistical data. Prepare a blank table to give the distribution of population according to sex and four religious for three groups , below 17 , 17 -15 and above.

13. a) Distinguish between positive and Negative Correlation.

(OR)

b) Predict the median for the following data:

Class Interval	0-10	10-20	20-30	30-40	40-50
Frequency	3	7	12	8	5

14.a) Write a short note on properties of poisson distribution.

(OR)

b) Identify the probability of occurrence of 6 heads in 10 tosses.

15. a) Explain the use of MS Excel in ANOVA.

(OR)

b) Identify and how to Calculate Mean and Standard Deviation by using SPSS.

SECTION – C (5 X 8 = 40 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.

(K4 (Or) K5)

16. a) Explain the methods of primary data collection and their advantages and disadvantages

(OR)

b) Discuss any one method of obtaining random sample from a population.

17. a) Point out various methods utilized for the graphic representation of grouped data (frequency distribution). Discuss them in brief.

(OR)

b) Create a Pie chart to represent the following data on the proposed outlay during the Fourth Five -year Plam.

Item	Agriculture	Industries/ Minerals	Irrigation and Power	Communication	Miscellaneous
Rs (in Crores)	6000	4000	2500	4500	3000

18. a) Outline in brief the utility of standard deviation in biology and write its merits and demerits.

(OR)

b) Show the Mean and Standard Deviation of the following frequency distribution:

Class	20-30	30-40	40-50	50-60	60-70	70-80	80-90
Frequency	3	61	132	153	140	51	2

19.a) Explain Chi-square test with its applications in biology.

(OR)

b) Identify the probability that x will lie between 25 and 35 when the mean and SD of a Normal distribution are respectively 20 and 10.

20.a) Discuss the Chart facilities available in MS Excell.

(OR)

b) Explain, how to carry out a one-way ANOVA using SPSS Statistics , interpret and report the results from this test.

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ETHICAL PAPER