



K25P 2891

Reg. No. :

Name :

III Semester M.Sc. Degree (CBCSS – OBE – Reg./Supple./Imp.)
Examination, October 2025
(2023 Admission Onwards)
BIOTECHNOLOGY
(Elective Course)
MSBTC03E05 : Biostatistics

Time : 3 Hours

Max. Marks : 40

PART – A

Answer **any five** questions. **Each** question carries **2** marks.

1. What is interquartile range ?
2. What is p-value ? In a statistical analysis, the p-value was found to be very small. What does it indicate ?
3. What is the main feature of negative correlation ?
4. What is a scatter diagram ?
5. Probability sampling is superior to non-probability sampling. Justify the statement.
6. If one researcher wants to predict the future (the unknown) based on data collected from the past (the known), which statistical tool can be recommended ? **(5×2=10)**

PART – B

Answer **any three** questions. **Each** question carries **4** marks.

7. Outline the important characteristics of normal distribution.
8. Find the standard deviation for the following frequency distributions :

Class	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50
Frequency	2	6	8	7	3

P.T.O.



9. Explain the construction of pie chart and its utilities.
10. What are the features of the paired sample t-test ?
11. The crop yield (kg/ha) in an agricultural field during 2002, 2003, 2004, 2005, 2006, 2007 and 2008 are 50, 80, 90, 60, 120, 150 and 130 kg/ha, respectively. Represent these data using a suitable line diagram. **(3×4=12)**

PART – C

Answer **any three** questions. **Each** question carries **6** marks.

12. What are the principles of experimental design ? Give an account of a completely randomized design.
13. Define null hypothesis and alternate hypothesis. Explain with a suitable example.
14. What is sampling ? What are the different types of sampling ? Explain with advantages and disadvantages.
15. What is ANOVA ? Write the major features of One-way ANOVA.
16. Define probability. Outline the application of the addition and multiplication theorems of probability. **(3×6=18)**

