

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION DECEMBER 2017
(Third Semester)

Branch - **BOTANY**

BIOLOGICAL DATA ANALYSIS

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks (10 x 2 = 20)

- 1 Explain two fundamental principles of statistical theory.
- 2 Define sample.
- 3 What is secondary data?
- 4 Define histogram.
- 5 Write any two limitation of arithmetic mean.
- 6 Not on band graph.
- 7 Comment on standard error.
- 8 Write any two application of T-test.
- 9 What is prediction?
- 10 Define vital statistics.

SECTION - B (25 Marks)

Answer **ALL** Questions

ALL Questions Carry **EQUAL** Marks (5 x 5 = 25)

- 1 1 a Explain stratified sampling.

OR

- b Write note on (i) Random sampling (ii) Non-random sampling.

- i 2 a Explain primary data and state its merits and demerits.

OR

- b Give an account on tabulation and its components of table.

- 13 a Explain median and its merits.

OR

- b What is mean deviation and state its merits?

- 14 a Explain chi-square test.

OR

- b Comment on T- test.

- 15 a What is regression analysis? What are its biological applications?

OR

- b What are the measures of vital statistics?

SECTION - C (30 Marks)

Answer any **THREE** Questions

ALL Questions Carry **EQUAL** Marks (3 x 10 = 30)

- 16 Describe the roles of statistics in biological science.
- 17 Write in detail about the process of collection of data.
- 18 Calculate the mean, median and standard deviation from the data recorded on length of leaves for 10 plants in cm.
Length of leaves: 4, 13, 10, 7.5, 5, 6.5, 9, 11.5, 8.5, 15.
- 19 Explain cumulative frequency curve with an example.
- 20 What are the general rules for construction of table and its types?