

Bago University
Department of Botany
Second Semester Examination, September, 2019

Fourth Year (B.Sc)
Botany Specialization
Answer All Questions

Bot.4110
Biostatistics
Time allowed: (3) Hours
(10 marks)

I. Determine whether each statement is TRUE or FALSE.

1. Statistics is also frequently used for purpose of prediction.
2. A characteristic that describes a sample is referred to as a population parameter.
3. Inferential statistic is used to express the level of certainty about estimates.
4. Statistical logic is only part of data interpretation.
5. The frequency of a particular distribution is the number of times.
6. Frequency distribution tables can be used for both categorical and numeric variable.
7. Median is the common measure of central tendency.
8. Harmonic average finds wide application in the construction of index number.
9. The median is unaffected by extreme values in a set of data.
10. A frequency distribution with more than two peaks or mode is called a multimodal.

II. Write correct word to complete the following sentences.

1. In a perfectly symmetrical distribution, the mean, median and ----- have the same value. (10 marks)
2. Standard deviation is also important in -----.
3. The sample mean is the usual estimator of a -----.
4. If the population standard deviation is finite, the standard error of the sample will tend to -----.
5. The outcomes of an experiment are called -----.
6. Probability theory is applied in everyday life in ----- assessment.
7. A sample statistics, the value obtained from the -----.
8. The term general population refers to everybody in a particular geographical -----.
9. Clustering can reduce travel and administrative -----.
10. Sampling errors and biases are induced by the sample -----.

III. Answer all questions.

1. State the two field of statistics.
2. Give the term class mark..
3. Describe the rules for data sets.
4. Clarify the uses and limitations of the weighted means.
5. Write down the variance formula.

(10 marks)

IV. Answer all questions.

1. Explain two improvement strategies for statical thinking.
2. Define geometric mean. Calculate the geometric mean of the first eight natural number.
3. During four successive years a home owner purchased oil for his furnace at respective costs of 16, 18, 21 and 25 cents per gallon. What was the average cost of oil over the four year period?
4. Write an account on Summary of probabilities.

(20 marks)

➤ P.T.O

V. Answer any three questions.

(30 marks)

1. Explain about when do the statistical calculation require.
2. Construct a histogram and polygon that corresponds to the frequency table given below.
(Data based on information reported by Aviation Data Services)

Air Plane Age (Years)	Frequency (f)
0.0 – 5.9	10
6.0 – 11.9	8
12.0 – 17.9	9
18.0 – 23.9	9
24.0 – 29.9	4

3. Define harmonic mean. For a statistics course, the final exam grade is weighted four times as much as each quiz score. For a final grade of 82 with quiz scores of 94, 89, 92 and 85. Compute the average grade.
4. Explain about the standard deviation.
5. If $P(A) = \frac{1}{2}$, $P(B) = \frac{7}{18}$ and $P(A \cup B) = \frac{2}{3}$. Find $P(A \cap B)$. Are A and B independent? Also find $P(A \setminus B)$.