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**SUBJECT CODE NO: - S-6073**  
**FACULTY OF SCIENCE AND TECHNOLOGY**  
**M.Sc. (Sem-III) (Zoology (Old))**  
**Examination May / June - 2023**  
**Quantitative Biology - 502**

[Time: 3:00 Hours]

[Max. Marks: 80]

Please check whether you have got the right question paper.

**N. B.**

- 1) Part 'A' is Compulsory
- 2) Attempt any five question from part 'B'
- 3) Draw neat & well Labelled diagrams wherever necessary.

**PART-A**

Q1 Attempt the following multiple-choice questions.

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1. When mean, median, and mode are identical, the distribution is:  
A. Positively Skewed                      B. Negatively Skewed  
C. Symmetrical Bivariate                  D. Uniform
2. The appropriate average for calculating average percentage increase in population is  
A. Arithmetic Mean                          B. Harmonic Mean  
C. Mode    D. Geometric Mean
3. Cumulative frequency is  
A. Decreasing                                  B. Increasing  
C. Different                                      D. None of these
4. Which mean is most affected by extreme values?  
A. Geometric Mean                          B. Harmonic Mean  
C. Arithmetic mean                          D. Trimmed Mean
5. The measures of dispersion are changed by the change of:  
A. Scale      B. Origin      C. Unit      D. None of these
6. Statistics results are:  
A. Absolutely Correct                          B. Not True  
C. True on Average                              D. Universally True

7. Sum of absolute deviations about median is  
A. Zero      B. Maximum      C. Minimum      D. One
8. Which measure of dispersion ensures the highest degree of reliability?  
A. Range      B. Mean Deviation  
C. Quartile Deviation      D. Standard Deviation
9. A set of values is said to be relatively uniform if it has:  
A. High Dispersion      B. Zero Dispersion  
C. Little Dispersion      D. Negative Dispersion
10. Statistics are aggregates of  
A. Methods      B. Calculations      C. Facts      D. Data

### PART B

(Attempt any five)

- Q2 Describe Absolute deviation and mean absolute deviation. 12
- Q3 Describe Coefficient of Std. deviation and Coefficient of Variation. 12
- Q4 Explain probability distribution and their properties. 12
- Q5 What is Database? Explain Biological database. 12
- Q6 What is the difference between one way ANOVA and two way ANOVA. 12
- Q7 Describe the data mining methods of sequence analysis. 12
- Q8 Calculate the correlation coefficient between the height of the father and his son from given data: 12

Height of father (inches)	65	66	67	68	67	69	70	64	65	63
Height of son (inches)	68	65	68	70	67	68	72	66	68	62

Test significance of correlation coefficient and interpret your result.