Biostatistics Exam 2

1. A numerical value used as a summary measure for a sample, such as sample mean, is known as a:
A. Population parameter
B. Sample parameter
C. Sample statistic
D. Population mean

2. Since the population size is always larger than the sample size, then the sample statistic
A. Can never be larger than the population parameter
B. Can never be equal to the population parameter
C. Can never be zero
D. Can never be smaller than the population parameter

3. The mean of a sample is:
A. Always equal to the mean of the population
B. Always smaller than the mean of the population
C. Computed by summing the data values and dividing the sum by (n - 1)
D. Computed by summing all the data values and dividing the sum by the number of items

4. The sum of the percent frequencies for all classes will always equal:
A. One
B. The number of classes
C. The number of items in the study
D. 100

5. In a five number summary, which of the following is not used for data summarization?
A. The smallest value
B. The largest value.
C. The median
D. The 25th percentile
E. The mean

6. Since the mode is the most frequently occurring data value, it
A. Can never be larger than the mean
B. Is always larger than the median
C. Is always larger than the mean
D. Must have a value of at least two

7. The difference between the largest and the smallest data values is the
A. Variance
B. Interquartile range
C. Range
D. Coefficient of variation

8. Which of the following is not a measure of central location?
A. Mean
B. Median
C. Variance
D. Mode

9. The sum of deviations of the individual data elements from their mean is
A. Always greater than zero
B. Always less than zero
C. Sometimes greater than and sometimes less than zero, depending on the data elements
D. Always equal to zero

10. A tabular summary of a set of data showing the fraction of the total number of items in several classes is a
A. Frequency distribution
B. Relative frequency distribution
C. Frequency
D. Cumulative frequency distribution

10. If a data set has an even number of observations, the median
A. Cannot be determined
B. Is the average value of the two middle items
C. Must be equal to the mean
D. Is the average value of the two middle items when all items are arranged in ascending order.

11. In a truly normal frequency distribution
A. The mean always is the same as the standard deviation
B. The mean is never the same as the mode
C. The mode is never the same as the median
D. The mean always is the same as the median

12. Researchers typically treat Likert scale responses (i.e., 1 = strongly agree, 2 = agree, etc.) as which scale of measurement?
A. Nominal scale of measurement
B. Ordinal scale of measurement
C. Interval scale of measurement
D. Ration scale of measurement

13. If a variable can be measured in fractions of units, it is what type of a variable.
A. Discrete
B. Continuous
C. Dependent
D. Independent

14. What type of graph is used for discrete data or qualitative data?
A. Bar graph
B. Histogram
C. Stem plot
D. Box plot

15. What type of graph is used for continuous data?
A. Bar graph
B. Histogram
C. Stem and leaf plot
D. Stem plot

16. In bar graphs, the bars:
A. Touch
B. Don't touch
C. Are equal
D. Are equally spaced

For questions 17and 18 use the table below:
Frequency distribution table of the variable "I am very happy with my cell phone service provider."

	x	f
Strongly agree	1	2
Agree	2	4
Neither agree or disagree	3	7
Disagree	4	6
Strongly disagree	5	4

17. The value for "f" represents the:
A. Number of measurement categories.
B. Number of responses within a given measurement category

18. In the above frequency table, how many people responded with an answer of 3?
A. 2
B. 4
C. 7
D. 1

19. With a case-control study design
A. The study may need to run for a long time for the disease to occur
B. We can study many different outcomes
C. We must begin with a disease-free group of individuals
D. It is easy to study diseases that have a long latency

20. In computing descriptive statistics from grouped data,
A. Data values are treated as if they occur at the midpoint of a class
B. The grouped data result is more accurate than the ungrouped result
C. The grouped data computations are used only when a population is being analyzed
D. All of the above answers are correct.