

NOVEMBER 2023
EBS 350
STATISTICS AND PROBABILITY I
40 MINUTES

Candidate's Index Number
Signature:

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
SCHOOL OF EDUCATIONAL DEVELOPMENT AND OUTREACH
INSTITUTE OF EDUCATION

COLLEGES OF EDUCATION
FOUR-YEAR BACHELOR OF EDUCATION (B.ED)
THIRD YEAR, SECOND SEMESTER MID-SEMESTER QUIZ, NOVEMBER 2023

20TH NOVEMBER 2023 STATISTICS AND PROBABILITY I 3:00 PM – 3:40 PM

Answer ALL the questions.
(20 MARKS)

Items 1 to 20 are stems followed by four options lettered A to D. Read each item carefully and circle the letter of the correct or best option.

1. Which of the following is **not** a disadvantage of using mean?
 - A. It cannot be computed in grouped data with open-ended class intervals.
 - B. It does not possess the desired algebraic property.
 - C. It is affected by extreme values.
 - D. None of the above.

2. The two methods of finding mode in a discrete series are
 - A. grouping method and ascending method.
 - B. grouping method and inspecting method.
 - C. table method and midpoint method.
 - D. None of the above.

3. When the values in a series do **not** have equal importance, we calculate the
 - A. arithmetic mean.
 - B. mode.
 - C. weighted mean.
 - D. None of the above

4. The values of extreme items do not influence the average for
 - A. mean.
 - B. median.
 - C. mode.
 - D. None of the above.

5. The number of observations smaller than the is the same as the number of observations larger than it.
- mean
 - median
 - mode
 - None of the above
6. What is the mean of the following numbers: 23, 45, 87, 40, 50?
- 34
 - 43
 - 49
 - 56
7. Which of the following is a characteristic of a mean?
- It is affected by extreme scores
 - It minimises the sum of squared deviations
 - The sum of deviations from the mean is zero
 - All of the above
8. Which of the following diagrams is used to find the value of mode graphically?
- Bar graph
 - Histogram
 - Pie chart
 - None of the above
9. What steps are involved in a central tendency test?
- Addition, subtraction, and division.
 - Addition, subtraction, multiplication, and division.
 - Determination of mean, median, and mode.
 - None of the above.
10. What does it mean when the central tendency is stated as the mean of samples?
- It means that the sample size is n , and the sample mean represents a set of data points taken from this sample with replacement.
 - It means that the sample size is n , and the sample mean represents a set of data points taken from this sample with replacement.
 - It means that the sample size is n , averaged to determine central tendency.
 - None of the above
11. Which one of the following statements **best** describes the median measure?
- It gives us the middle score in a data set, which will change if you rearrange the scores in any order that does not change their magnitude.
 - It gives us the middle score in a data set, which will not change if you rearrange the scores in any order that does not change their magnitude.
 - It is always less than or equal to the mean of a data set.
 - None of the above
12. What does it mean when the central tendency was stated as the median of samples?
- It means that the sample size is n , and the sample median represents a set of data points taken from this sample with replacement.
 - It means that the sample size is n , averaged to determine central tendency.
 - It means that the sample size n is doubled and averaged to determine central tendency.
 - All of the above.

13. Which one of the following statements does **not** contain an assumption, of the standard deviation measure?
- A. The data points are not all positive or negative.
 - B. The data points in a data set are not necessarily equal values.
 - C. The distribution is normal.
 - D. None of the above
14. Which of these statements is **True**?
- A. If a data set is skewed, the mean and standard deviation are not necessarily equal.
 - B. If a data set is symmetrical, then the mean, median, and standard deviation are equal.
 - C. The sample distribution is the same as that of the population from which it came.
 - D. None of the above
15. Which of the following measures of dispersion can attain a negative value?
- A. Mean deviation
 - B. Quartile deviation
 - C. Range
 - D. Standard deviation
16. The elimination of extreme scores at the bottom of a data set has the effect of
- A. doubling the mean.
 - B. lowering the mean.
 - C. raising the mean.
 - D. None of the above.
17. Which of the following **cannot** be calculated for open-ended distributions?
- A. Mean deviation
 - B. Range
 - C. Standard deviation
 - D. None of the above
18. When the arithmetic mean is multiplied by the coefficient of variation, what will be the resultant value?
- A. Coefficient of deviation
 - B. Coefficient of Mean
 - C. Standard deviation
 - D. Variance
19. What is the exact mean deviation of the values 12, 15, and 18?
- A. 0
 - B. 2
 - C. 3
 - D. 6
20. Find the variance of the values 3,6,8,9,11,7,10,12.
- A. 3.46
 - B. 4.25
 - C. 7.36
 - D. None of these