

Archive Lecture 8

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- 1. In a frequency distribution, how does the assumption that data follow a known distribution, such as the normal distribution, potentially affect the analysis?
- A) It guarantees that the sample mean will equal the population mean.
- B) It may lead to incorrect conclusions if the data do not fit the assumed distribution.
- C) It simplifies the calculation of standard deviations.
- D) It ensures that all data points are normally distributed.

Answer: It may lead to incorrect conclusions if the data do not fit the assumed distribution.

- 2. What does the term "kurtosis" refer to in the context of a distribution?
- A) The skewness of the distribution.
- B) The flatness or peakedness of the distribution.
- C) The average spread of data points around the mean.
- D) The relationship between the mean and median.

Answer: The flatness or peakedness of the distribution.

- 3. Which of the following statements about the normal curve is true?
- A) All symmetrical distributions are normal.
- B) The area under the normal curve is always greater than 1.
- C) The normal curve is defined solely by its mean and standard deviation.
- D) The normal curve can be skewed if the sample size is large enough.

Answer: C) The normal curve is defined solely by its mean and standard deviation.

- 4. If a distribution is described as bimodal, what does this imply about the data?
- A) The data are uniformly distributed across all values.
- B) There are two distinct peaks representing two different populations within the data.
- C) The data are perfectly symmetrical around the mean.
- D) The data only have one mode, which is the highest frequency. Answer: There are two distinct peaks representing two different populations within the

data.

5. According to the central limit theorem, what happens to the distribution of sample means as the sample size increases?

A) It becomes less normal regardless of the population distribution.

B) It approaches a normal distribution, regardless of the shape of the population distribution.

- C) It remains uniform as sample size increases.
- D) It will always exhibit positive skewness.

Answer: It approaches a normal distribution, regardless of the shape of the population

distribution.

ملاحظة:

تمّتْ الاستعانة-بعد الله- ببرامج (AI) لكتابة الأسئلة.. وذلك يعود لعدم توفّر اسئلة سنوات سابقة على المحاضرة الثامنة