

CHAPTER-13 | STATISTICS

QUIZ
PART-08

1. Median is also called:

- A. actual average
- B. positional average
- C. arithmetic average
- D. modal value (B)

Explanation: Median is called a positional average because it depends on the position of the middle value in an ordered data set.

2. Cumulative frequency is obtained by:

- A. subtracting frequencies
- B. multiplying frequencies
- C. adding frequencies
- D. dividing frequencies (C)

Explanation: Cumulative frequency is found by adding the frequencies of the classes successively.

3. To find the median of grouped data, we first need:

- A. class mark and mode
- B. cumulative frequency and $n/2$
- C. mean and range
- D. midpoint and mode (B)

Explanation: For grouped data, median is found using cumulative frequency and the value of $n/2$.

4. The median class is the class whose cumulative frequency is:

- A. smallest
- B. equal to zero
- C. near or greater than $n/2$
- D. less than all others (C)

Explanation: The median class is the class where the cumulative frequency first becomes equal to or greater than $n/2$.

5. In the median formula, l stands for:

- A. lower limit of median class
- B. upper limit of median class
- C. total frequency
- D. class mark (A)

Explanation: In the median formula, l is the lower limit of the median class.

6. In the median formula, f stands for:

- A. total frequency
- B. cumulative frequency
- C. frequency of median class
- D. frequency of first class (C)

Explanation: Here, f represents the frequency of the median class.

7. If the number of observations is odd, median is the:

- A. $n/2$ th observation
- B. $(n+1)/2$ th observation
- C. last observation
- D. first observation (B)

Explanation: For an odd number of observations, the median is the middle term, that is $(n+1)/2$ th observation.

8. Median of 2, 7, 4, 8, 9, 10, 6, 12, 13 is:

- A. 8
- B. 11
- C. 9
- D. 10 (A)

Explanation: After arranging the numbers in order, the middle value is 8.

9. The empirical relation is:

- A. $3\text{Mean} = \text{Mode} + 2\text{Median}$
- B. $3\text{Median} = \text{Mode} + 2\text{Mean}$
- C. $2\text{Mode} = \text{Mean} + \text{Median}$
- D. $\text{Mean} = \text{Median} + \text{Mode}$ (B)

Explanation: The empirical relation between mean, median, and mode is $3\text{Median} = \text{Mode} + 2\text{Mean}$.

10. If mean = 25 and mode = 25, then median is:

- A. 13
- B. 9
- C. 25
- D. 0 (C)

Explanation: Using $3\text{Median} = \text{Mode} + 2\text{Mean}$, we get $3\text{Median} = 25 + 50 = 75$, so median = 25.