CHAPTER-5 | Tales by Dots and Lines

QUIZ PART-05

1. If 2 is subtracted from every value in a data set, the mean will —
   A. Increase by 2
   B. Decrease by 2
   C. Remain unchanged
   D. Become zero (B)

Explanation : Subtracting the same number from all observations decreases the mean by that number.

2. If every value in a data set is doubled, the mean will —
   A. Remain unchanged
   B. Be halved
   C. Be doubled
   D. Increase by 1 (C)

Explanation: Multiplying every observation by 2 also multiplies the mean by 2.

3. The median of an ordered data set is the —
   A. Largest value
   B. Smallest value
   C. Middle value
   D. Sum of values (C)

Explanation: The median is the middle observation when data is arranged in order.

4. For the data 3, 5, 7, 9, 11, 13, the median is —
   A. 7
   B. 8
   C. 9
   D. 10 (B)

Explanation: Median = (7 + 9) ÷ 2 = 8.

5. If every value in a data set increases by 5, the mean will —
   A. Increase by 5
   B. Decrease by 5
   C. Remain unchanged
   D. Double (A)

Explanation : Adding a constant to every value increases the mean by the same constant.

6. Which measure is always based on the position of values in an ordered data set?
   A. Mean B. Median
   C. Range D. Frequency (B)

Explanation : Median depends on the position of observations after arranging them.

7. The median of 5, 7, 9 is 7. After adding 4, the new median becomes —
   A. 5 B. 6
   C. 7 D. 8 (B)

Explanation : Ordered data: 4, 5, 7, 9. Median = (5 + 7) ÷ 2 = 6.

8. Which measure is most affected when every value is multiplied by the same number?
   A. Mean
   B. Position
   C. Order only
   D. Number of observations (A)

Explanation : The mean changes proportionally when all values are multiplied.

9. The median of a data set with an even number of observations is the —
   A. Largest value
   B. Smallest value
   C. Average of the two middle values
   D. First value (C)

Explanation : For an even number of observations, the median is the average of the two middle terms.

10. The main idea of this section is that mean depends on _____ while median depends on _____.
    A. Position, Sum
    B. Sum of values, Position of values
    C. Frequency, Range
    D. Range, Frequency (B)

Explanation : Mean is based on the sum of observations, whereas median is based on their positions in ordered data.