

CHAPTER-13 | STATISTICS

QUIZ
PART-02

1. Step-deviation method is used to make calculations:

- A. longer
- B. easier
- C. impossible
- D. exact only (B)

Explanation: Step-deviation method simplifies calculations by reducing large values.

2. In step-deviation method, a stands for:

- A. actual mean
- B. assumed mean
- C. class mark
- D. frequency (B)

Explanation: The symbol a represents the assumed mean used to simplify calculations.

3. In step-deviation method, h stands for:

- A. height
- B. frequency
- C. class-size
- D. class mark (C)

Explanation: The symbol h represents the class-size (width of class interval).

4. The formula of u_i is:

- A. $(x_i + a) / h$
- B. $(x_i - a) / h$
- C. $(x_i - d) / h$
- D. $(x_i + h) / a$ (B)

Explanation: In step-deviation method, $u_i = (x_i - a) / h$.

5. In grouped data, x_i represents:

- A. class mark
- B. frequency
- C. deviation
- D. total frequency (A)

Explanation: x_i denotes the class mark (midpoint of class interval).

6. Deviation d_i is calculated as:

- A. $a - x_i$
- B. $x_i + a$
- C. $x_i - a$
- D. $x_i \times a$ (C)

Explanation: Deviation is calculated by subtracting assumed mean from class mark.

7. Mean formula in step-deviation method is:

- A. $a + (\sum f_i u_i / \sum f_i)$
- B. $a + h (\sum f_i u_i / \sum f_i)$
- C. $h + a \sum f_i$
- D. $\sum f_i / \sum u_i$ (B)

Explanation: Mean is calculated using $\bar{x} = a + h (\sum f_i u_i / \sum f_i)$.

8. Step-deviation method is useful when values are:

- A. very small
- B. simple
- C. large
- D. zero (C)

Explanation: It is useful when data values are large or complex.

9. Midpoint of class 20–30 is:

- A. 20
- B. 25
- C. 30
- D. 35 (B)

Explanation: Midpoint is calculated as $(20 + 30) / 2 = 25$.

10. f_i represents:

- A. class mark
- B. frequency
- C. assumed mean
- D. class-size (B)

Explanation: f_i indicates the frequency of each class interval.