1. Which method of finding the mean is most convenient when the class size and values are large?
   A. Direct method
   B. Step-deviation method
   C. Assumed mean method
   D. Mean by mode formula (B)

Explanation : Step-deviation method simplifies calculations by reducing the values using a common factor.

2. What is the empirical formula relating mean, median, and mode?
   A. Mode = 2 Median - 3 Mean
   B. 3 Median = Mode + 2 Mean
   C. Mean = Mode + 3 Median
   D. Mode = Mean + Median (B)

Explanation : The empirical relation is 3 Median = Mode + 2 Mean.

3. In the formula for mean using step-deviation, what does 'u_i' represent?
   A. Assumed mean
   B. Deviation of class mark from a
   C. Class mark divided by class width
   D. Deviation divided by class width (D)

Explanation : 'u_i' is calculated as (x_i - a)/h, where x_i is class mark, a is assumed mean, and h is class size.

4. What is the lower limit of the median class called in the median formula?
   A. Class size
   B. Cumulative frequency
   C. Lower boundary (l)
   D. Frequency of median class (C)

Explanation : In the median formula, 'l' represents the lower boundary of the median class.

5. Which class is considered the modal class?
   A. Class with the least frequency
   B. Class with the highest class mark
   C. Class with maximum frequency
   D. Class with the smallest class width (C)

Explanation : The class with the maximum frequency is known as the modal class.

6. If a class interval is 40 - 50, what is its class mark?
   A. 40 B. 50
   C. 45 D. 90 (C)

Explanation : Class mark is the average of upper and lower class limits: (40 + 50)/2 = 45.

7. What type of frequency distribution uses cumulative totals?
   A. Modal distribution
   B. Continuous frequency
   C. Cumulative frequency distribution
   D. Discrete distribution (C)

Explanation : A cumulative frequency distribution involves adding frequencies up to each class.

8. Which formula is used to calculate the mode of grouped data?
   A. $l + (f1 - f0)/(2f1 - f0 - f2) \times h$
   B. $l + (n/2 - cf)/f \times h$
   C. $\Sigma fi\ xi / \Sigma fi$
   D. $a + h \times \Sigma fiu/\Sigma fi$ (A)

Explanation : The mode formula for grouped data is Mode = $l + (f1 - f0)/(2f1 - f0 - f2) \times h$.

9. What is the median value when total frequency n is odd?
   A. $(n + 1)/2$ B. $n/2$
   C. n D. $(n - 1)/2$ (A)

Explanation : For odd n, the median is the value at position $(n + 1)/2$.

10. What type of graph is drawn using cumulative frequencies?
    A. Histogram B. Frequency polygon
    C. Ogive D. Bar graph (C)

Explanation : An ogive is drawn using cumulative frequency data.