Assignment

Q-: What is the value of the 99 percentile?

2, 2, 3, 4, 5, 5, 5, 6, 7, 8, 8, 8, 8, 8, 9, 9, 10, 11, 11, 12.

⇒ The distribution is as follows :-

2, 2, 3, 4, 5, 5, 5, 6, 7, 8, 8, 8, 8, 9, 9, 10, 11, 11, 12

Formula for Index Position,

$$\text{Value of Percentile} = \frac{\text{Percentile(given)}}{100} \times (n+1)$$

where n is no. of samples in the given distribution.

Here it is n = 20.

$$\Rightarrow \frac{99}{100} \times (20+1)$$

$$\Rightarrow \frac{99}{100} \times 21$$

$$\Rightarrow 99 \times .21$$

$$\Rightarrow 20.79$$

$\Rightarrow 21^{th}$ Index position

$\Downarrow$

12

Because their is no index position 21st in a distribution so we take 20th i.e the last index position & the number at this position is the answer

∴ 99 percentile value = 12 Ans.