## Sol. of Quiz 1 (Prob. Sec A)

**Sol 1)**

### Stem - & - leaf plot

$$
\begin{array}{c|l}
2 & 5.8, 6.6, 6.9, 7.0, 7.1, 7.6, 7.9, 8.5, 8.5, 8.8, 8.9, 9.3, 9.3, 9.4, 9.4 \\
3 & 0.1, 0.1, 0.4, 0.4 \cancel{\phantom{xx}}, 0.5, 1.2, 1.2, 1.4, 2.1, 2.3
\end{array}
$$

$$100 P = 90 \Rightarrow P = \frac{90}{100} = \frac{9}{10}$$

$$np = 2\overset{5}{\cancel{5}} \cdot \frac{9}{10} = \frac{45}{2} = 22.5 \ (\text{Not an integer})$$

So **90th Percentile = 31.4** ($23^{rd}$ value)

For median $P = \frac{1}{2}$ & $np = 25 \cdot \frac{1}{2} = 12.5$ (Not an integer)

So **Median = 29.3** (13th value)

**Sol 2**

### standard deviation is the

best statistic for measuring the **variation**
**in** the data because it measure
variation in the same unit as the $\overset{\text{unit of}}{\text{original}}$
data is.