

(S)	Study Mode	Attendance	Marks
	online	high	90
	offline	low	60
	online	medium	75
	offline	high	85
	Hybrid	low	65

for Study Mode:-

$$\text{Mean}(S) = 75$$

$$SD(S) = 11.4$$

$$SD(\text{Assessment } Sm = \text{online}) = ?$$

$$\text{mean} = (90 + 75)/2 = 82.5$$

$$SD(Sm = \text{online}) = \sqrt{\frac{(90 - 82.5)^2 + (75 - 82.5)^2}{2}} = \sqrt{\frac{112.5}{2}}$$

$$= \sqrt{56.25} = 7.5$$

$$SD(Sm = \text{offline}) = ?$$

$$\text{mean} = (60 + 85)/2 = 72.5$$

$$SD(Sm = \text{offline}) = \sqrt{\frac{(60 - 72.5)^2 + (85 - 72.5)^2}{2}} = 12.5$$

$$\text{mean}(Sm = \text{hybrid}) = 65$$

$$SD = 0$$

$$SDR = 11.4 - \left\{ \frac{2}{5}(7.5) + \frac{2}{5}(12.5) + 0 \right\}$$

$$SDR(SM) = 3.4$$

for Attendance :-

$$\text{mean}(Att = \text{high}) = (90 + 85)/2 = 87.5$$

$$SD(Att = \text{high}) = \sqrt{\frac{(90 - 87.5)^2 + (85 - 87.5)^2}{2}} = 2.5$$

$$\text{mean}(Att = \text{low}) = (60 + 65)/2 = 62.5$$

$$SD(Att = \text{low}) = \sqrt{\frac{(60 - 62.5)^2 + (65 - 62.5)^2}{2}} = 2.5$$

$$\text{mean}(\bar{A} = \text{med}) = 75$$

$$\text{SD}(\bar{A} = \text{med}) = 0$$

$$\begin{aligned} \text{SDR}(\bar{A} = \text{on}) &= 11.4 - \left\{ \frac{2}{5}(2.5) + \frac{2}{5}(2.5) + \frac{1}{5}(0) \right\} \\ &= 9.4 \text{ (greater)} \end{aligned}$$

