

### Case 1

The following information of wages of 20 workers in a Industry has been provided by the management. Management is interested to find out the statistical partition values from the data. You as an analyst have to calculate and support the management in decision making process. Find the values From **Question 1-5**.

S.No.	1	2	3	4	5	6	7	8	9	10
Wages (Rs.)	330	320	550	470	220	510	280	170	680	490
S.No.	11	12	13	14	15	16	17	18	19	20
Wages (Rs.)	400	270	440	480	620	240	330	430	380	450

Find the values of  $Q_1$ . (Refer Case 1)

- (i) 290 (ii) 280 (iii) 300 (iv) 270

Find the values of  $Q_3$ . (Refer Case 1)

- (i) 485 (ii) 487.5 (iii) 497.5 (iv) 460

Find the values of  $D_6$ . (Refer Case 1)

- (i) 445 (ii) 446 (iii) 400 (iv) 448

Find the values of  $P_{45}$ . (Refer Case 1)

- (i) 387 (ii) 390 (iii) 380 (iv) 389

Find the values of Median. (Refer Case 1)

- (i) 410 (ii) 415 (iii) 417 (iv) 418

### Case 2

Govt of India conducted a sample survey and the data of two states with different section of the society was gathered in following table, the distribution of data in two states shown according to their weights in kg. Govt wants to plan welfare schemes on the basis of the following data. Calculate the parameters required in **Question 6-10**

Weight (Kg)	20-30	30-40	40-50	50-60	60-70
State A	7	10	20	18	7
State B	5	9	21	15	6

Calculate the arithmetic mean of State A. (Refer Case 2)

- (i) 46.29kg (ii) 45.55kg (iii) 47.65kg (iv) 49.75kg

Calculate the arithmetic mean of State B. **(Refer Case 2)**

- (i) 46.43 kg (ii) 47.55 kg (iii) 46.29 kg (iv) 44.78kg

Calculate the standard deviation of State A. **(Refer Case 2)**

- (i) 10.93 kg (ii) 11.55 kg (iii) 12.02 kg (iv) 11.76 kg

Calculate the standard deviation of State B. **(Refer Case 2)**

- (i) 11.76 kg (ii) 10.93 kg (iii) 10.93 kg (iv) 12.24 kg

Which State shows the greater variation in weights. **(Refer Case 2)**

- (i) State A (ii) State B  
(iii) Both A and B (iv) None of these

1. The sum of the square of deviations from the mean is:

- (i) least (ii) maximum (iii) zero (iv) none of these

2. A distribution has mean 8.5, median=8.3 and mode=7.4. the distribution is:

- (i) Positively skewed (ii) negatively skewed  
(iii) symmetrical (iv) none of these

3. From the following information given below

	Factory A	Factory B
Mean daily wages	12	8
No. of workers	80	120

- (i) Factory A pays a larger amount as daily wages  
(ii) Factory B pays a larger amount as daily wages  
(iii) Both factories pay an equal amount as daily wages  
(iv) It cannot be determined

4. If an observation in a series is zero, then its Geometric Mean will be:

- (i) indeterminate (ii) negative (iii) zero (iv) cannot be defined

5. The median is

- (i) 4<sup>th</sup> decile (ii) 50<sup>th</sup> percentile (iii) 8<sup>th</sup> decile (iv) 35<sup>th</sup> Percentile

6. If mean=50, S.D= 25 then C.V. is

(i) 200 (ii) 100 (iii) 50 (iv) 150

7. Which of the following measures is most affected by the extreme values?

- (i) Standard Deviation (ii) Mean deviation  
(iii) Range (iv) Median

8. Which of the following is the unit-free number?

- (i) Coefficient of variation (ii) Standard Deviation  
(iii) Range (iv) Median

9. In Deciles, the series is divided

- (i) 4 parts (ii) 3 parts (iii) 10 parts (iv) 100 parts

10. The second quartile is same as

- (i) Mean (ii) Median (iii) 7<sup>th</sup> Deciles (iv) 20<sup>th</sup> Percentile