

1. The average salary of 50 men was ₹ 80 but it was found that salary of 2 of them were ₹ 46 and ₹ 28 which was wrongly taken as ₹ 64 and ₹ 82. The revised average salary is :
 - (a) ₹ 80
 - (b) ₹ 78.56
 - (c) ₹ 85.26
 - (d) ₹ 82.92

2. Inter Quartile Range is _____ of Quartile Deviation.
 - (a) Half
 - (b) Double
 - (c) Triple
 - (d) Equal

3. When mean is 3.57 and mode is 2.13 then the value of median is _____.
 - (a) 3.09
 - (b) 5.01
 - (c) 4.01
 - (d) None of these

MEASURES OF CENTRAL TENDENCY AND DISPERSION

4 The equation of a line is $5x + 2y = 17$. Mean deviation of y about mean is 5. Calculate mean deviation of x about mean.

- (a) -2**
- (b) 2**
- (c) -4**
- (d) None**

5 If variance of x is 5, then find the variance of $(2 - 3x)$

- (a) 10**
- (b) 45**
- (c) 5**
- (d) -13**

6. In a class of 11 students, 3 students were failed in a test. 8 students who passed secured 10, 11, 20, 15, 12, 14, 26 and 24 marks respectively. What will be the median marks of the students :

- (a) 12**
- (b) 15**
- (c) 13**
- (d) 13.5**

MEASURES OF CENTRAL TENDENCY AND DISPERSION

7. The mean weight of 15 students is 110 kg. The mean weight of 5 of them is 100 kg. and of another five students is 125 kg. then the mean weight of the remaining students is :

- (a) 120
- (b) 105
- (c) 115
- (d) None of these

8. A lady travel at a speed of 20 km/h and returned at quicker speed. If her average speed of the whole journey is 24 km/h, find the speed of return journey (in km/h)

- (a) 25
- (b) 30
- (c) 35
- (d) 38

9. Given the observations : 4, 9, 11, 14, 37. The Mean deviation about the Median is

- (a) 11
- (b) 8.5
- (c) 7.6
- (d) 7.45

MEASURES OF CENTRAL TENDENCY AND DISPERSION

10. If the Arithmetic mean between two numbers is 64 and the Geometric mean between them is 16. The Harmonic Mean between them is _____.

- (a) 64
- (b) 4
- (c) 16
- (d) 40

11. The average of 5 quantities is 6 and the average of 3 is 8. what is the average of the remaining two.

- (a) 4
- (b) 5
- (c) 3
- (d) 3.5

12. The standard deviation of the weights (in kg) of the students of a class of 50 students was calculated to be 4.5 kg. Later on it was found that due to some fault in weighing machine, the weight of each student was under measured by 0.5 kg. The Correct standard deviation of the weight will be:

- (a) Less than 4.5
- (b) Greater than 4.5
- (c) Equal to 4.5
- (d) Can not be determined

MEASURES OF CENTRAL TENDENCY AND DISPERSION

13. The median of following numbers, which are given in ascending order is 25. Find the Value of X.

11 13 15 19 $(x + 2)$ $(x + 4)$ 30 35 39 46

(a) 22

(b) 20

(c) 15

(d) 30

14 The average age of a group of 10 students was 20 years. The average age increased by two years when two new students joined the group. What is the average age of two new students who joined the group?

(a) 22 years

(b) 30 years

(c) 44 years

(d) 32 year

MEASURES OF CENTRAL TENDENCY AND DISPERSION

15. If standard deviation of first 'n' natural numbers is 2 then value of 'n' is

- (a) 10**
- (b) 7**
- (c) 6**
- (d) 5**

16 Geometric Mean of three observations 40,50 and X is 10. The value of X is

- (a) 2**
- (b) 4**
- (c) $1/2$**
- (d) None of the above.**

17. The standard deviation is independent of change of

- (a) Scale**
- (b) Origin**
- (c) Both origin and scale**
- (d) None of these.**

MEASURES OF CENTRAL TENDENCY AND DISPERSION

18 .The mean salary of a group of 50 persons is ₹ 5,850. Later on it is discovered that the salary of one employee has been wrongly taken as ₹ 8,000 instead of ₹ 7,800. The corrected mean salary is

- (a) ₹ 5,854
- (b) ₹ 5,846
- (c) ₹ 5,650
- (d) None of the above.

19 .If the mode of a data is 18 and mean is 24, then median is -

- (a) 18
- (b) 24
- (c) 22
- (d) 21

20. If sum of squares of the values =3390, $N = 30$ and standard deviation =7, find out the mean.

- (a) 113
- (b) 210
- (c) 8
- (d) None of these

MEASURES OF CENTRAL TENDENCY AND DISPERSION

21. If the mean of a frequency distribution is 100 and coefficient of variation is 45% then standard deviation is:

- (a) 45**
- (b) 0.45**
- (c) 4.5**
- (d) 450**

Which of the following measures of central tendency

22 .The average age of 15 students of a class is 15 years. Out of them, the average age of 5 students is 14 years and that of the other 9 students is 16 years. The age of the 15th student is:

- (a) 11 years**
- (b) 14 years**
- (c) 15 years**
- (d) None of these**

MEASURES OF CENTRAL TENDENCY AND DISPERSION

23. Coefficient of mean deviation about mean for the first 9 natural numbers is

- (a) $200/9$
- (b) 80
- (c) $400/9$
- (d) 50

24 .If mean = 5, Standard deviation = 2.6, median = 5 and quartile deviation = 1.5, then the coefficient of quartile deviation equals

- (a) 35
- (b) 39
- (c) 30
- (d) 32

25.The mean of the following data is 6. Find the value of 'P'.

x	:	2	4	6	10	P+5
f	:	3	2	3	1	2

- (a) 4
- (b) 6
- (c) 8
- (d) 7

MEASURES OF CENTRAL TENDENCY AND DISPERSION

26 The third decile for the numbers 15, 10, 20, 25, 18, 11, 9, 12, is:

- (a) 13**
- (b) 10.70**
- (c) 11**
- (d) 11.50**

27 .If the first quartile is 142 and semi-inter quartile range is 18, then the value of median is:

- (a) 151**
- (b) 160**
- (c) 178**
- (d) None of these**

28. If the arithmetic mean of two numbers is 10 and the geometric mean of these numbers is 8, then the harmonic mean is:

- (a) 9**
- (b) 8.9**
- (c) 6.4**
- (d) None of these**

MEASURES OF CENTRAL TENDENCY AND DISPERSION

29 .The standard deviation of a variable x is known to be

10. The standard deviation of $50 + 5x$ is

- (a) 50**
- (b) 100**
- (c) 10**
- (d) 500**

30. The harmonic mean H of two numbers is 4 and their arithmetic mean A and the geometric mean G satisfy the equation $2A + G^2 = 27$, then the numbers are

- (a) (1, 3)**
- (b) (9, 5)**
- (c) (6, 3)**
- (d) (12, 7)**

31 Coefficient of quartile deviation is equal to

- (a) Quartile deviation $\times 100/\text{median}$**
- (b) Quartile deviation $\times 100/\text{mean}$**
- (c) Quartile deviation $\times 100/\text{mode}$**
- (d) None**

MEASURES OF CENTRAL TENDENCY AND DISPERSION

32. If all the observations are increased by 5, then

- (a) S.D. would be increased by 5**
- (b) Mean deviation would be increased by 5**
- (c) Quartile deviation would be increased by 5**
- (d) All the three would not be increased by 5**

33. What is value of mean deviation about mean from the number 5, 8, 6, 3 and 4 ?

- (a) 5.20**
- (b) 7.20**
- (c) 1.44**
- (d) 2.23**

34. If a variance of a random variable 'x' is 23, then what is variance of $2x + 10$?

- (a) 56**
- (b) 33**
- (c) 46**
- (d) 92**

MEASURES OF CENTRAL TENDENCY AND DISPERSION

35. The SD of first n natural number is _____

(a) $\sqrt{\frac{n^2-1}{12}}$

(b) $\sqrt{\frac{n(n+1)}{12}}$

(c) $\sqrt{\frac{n(n-1)}{6}}$

(d) None of these.

36 .If mean and coefficient of variation of the marks of 10 students is 20 and 80 respectively. What will be variance of them?

(a) 256

(b) 16

(c) 25

(d) None of these.

37. Mean for the data 6, 4, 1, 6, 5, 10, 3 is 5 when each observation added by 2, what is mean of the data

(a) 5

(b) 6

(c) 7

(d) 10

MEASURES OF CENTRAL TENDENCY AND DISPERSION

38 .The geometric mean of three numbers 40, 50 and x is 10, the value of x is

- (a) 5**
- (b) 4**
- (c) 2**
- (d) $1/2$**

39 .The rates of returns from three different shares are 100%, 200% and 400% respectively. The average rate of return will be:

- (a) 350%**
- (b) 233.33%**
- (c) 200%**
- (d) 300%**

40. If geometric mean is 6 and arithmetic mean is 6.5, then harmonic mean will be:

- (a) $6^2/6.5$**
- (b) $6/6.5^2$**
- (c) $6/6.5$**
- (d) None of the above.**

MEASURES OF CENTRAL TENDENCY AND DISPERSION

41 .A company's past 10 years average earning is ₹ 40 crores. To have the same average earning for 11 years including these 10 years, how much earning must be made by the company in the eleventh year?

- (a) ₹ 40 crores**
- (b) ₹ $40 \times 10 / 11$ crores**
- (c) More than ₹ 40 crores**
- (d) None of the above.**

42. For a moderately skewed distribution, the relationship between mean, median and mode is :

- (a) Mean - Mode = 2 (Mean - Median)**
- (b) Mean - Median = 3(Mean - Mode)**
- (c) Mean - Median = 2 (Mean - Mode)**
- (d) Mean - Mode = 3 (Mean - Median).**

MEASURES OF CENTRAL TENDENCY AND DISPERSION

43 .If arithmetic mean and coefficient of variation of x are 10 and 40, respectively then the variance of $-15 + 3x/2$ will be:

- (a) 64**
- (b) 81**
- (c) 49**
- (d) 36**

44. Mean deviation is the least when deviations are taken from

- (a) Mean**
- (b) Median**
- (c) Mode**
- (d) Harmonic mean**

45. If each item is reduced by 15 A. M is

- (a) reduced by 15**
- (b) increased by 15**
- (c) reduced by 10**
- (d) none**

46. If the S.D. of the 1st n natural Nos. is 30, Then the value of n is

- (a) 19**
- (b) 20**
- (c) 21**
- (d) None**

47. Which of the following is positional average?

- (a) Median**
- (b) GM**
- (c) HM**
- (d) AM**

MEASURES OF CENTRAL TENDENCY AND DISPERSION

48. Standard deviation is _____ times of

$$\sqrt{MD \times QD}$$

(a) $2/3$

(b) $4/5$

(c) $\sqrt{\frac{15}{8}}$

(d) $\sqrt{\frac{8}{15}}$

49. If the profits of a company remain same for the last ten months then the S.D. of profits of the company would be:

(a) Positive

(b) Negative

(c) Zero

(d) (a) or (c)

50. For a symmetric distribution

(a) Mean = Median = Mode

(b) Mode = 3 Median - 2 Mean

(c) Mode = $1/3$ Median = $1/2$ Mean

(d) None

MEASURES OF CENTRAL TENDENCY AND DISPERSION

51. The sum of mean and SD of a series is $a + b$, if we add 2 to each observation of the series then the sum of mean and SD is

(a) $a + b + 2$

(b) $6 - a + b$

(c) $4 + a - b$

(d) $a + b + 4$

52. The approximate ratio of SD, MD, QD is:

(a) $3 : 4 : 5$

(b) $2 : 3 : 4$

(c) $15 : 12 : 10$

(d) $5 : 6 : 7$

53. Find the mode of the following data:

Class Interval	3 – 6	6 – 9	9 – 12	12 – 15	15 – 18	18 – 21
Frequency	2	5	10	23	21	12

(a) 25

(b) 4.6

(c) 14.6

(d) 13.5

54 .The harmonic mean A and B is $\frac{1}{3}$ and harmonic mean of C and D is $\frac{1}{5}$. The harmonic mean of ABCD is

(a) $\frac{8}{15}$

(b) $\frac{1}{4}$

(c) $\frac{1}{15}$

(d) $\frac{5}{3}$

55.Which one of these is least affected by extreme values?

(a) Mean

(b) Median

(c) Mode

(d) None

MEASURES OF CENTRAL TENDENCY AND DISPERSION

56. The mean of 'n' observation is 'x'. If k is added to each observation, then the new mean is.

- (a) k**
- (b) xk**
- (c) x-k**
- (d) x+k**

57. If $y = 3 + 1.9x$, and mode of x is 15, then the mode of y is:

- (a) 15.9**
- (b) 27.8**
- (c) 35.7**
- (d) 31.5**

58. If the relationship between x and y is given by

$2x + 3y = 10$ and the range of y is 10, then what is the range of x ?

- (a) 10**
- (b) 18**
- (c) 8**
- (d) 15**

MEASURES OF CENTRAL TENDENCY AND DISPERSION

59 If the first quartile is 56.50 and the third quartile is 77.50, then the co-efficient of quartile deviation is:

- (a) 638.09**
- (b) 15.67**
- (c) 63.80**
- (d) 156.71**

60. If the Standard Deviation of data 2, 4, 5, 6, 8, 17 is 4.47, then Standard Deviation of the data 4, 8, 10, 12, 16, 34 is

- (a) 4.47**
- (b) 8.94**
- (c) 13.41**
- (d) 2.24**

MEASURES OF CENTRAL TENDENCY AND DISPERSION

Answer Key

1	2	3	4	5
b	b	a	b	b
6	7	8	9	10
a	b	b	c	b
11	12	13	14	15
c	c	a	d	b
16	17	18	19	20
c	b	b	c	c
21	22	23	24	25
a	a	c	c	d
26	27	28	29	30
b	b	c	a	c

MEASURES OF CENTRAL TENDENCY AND DISPERSION

Answer Key

31	32	33	34	35
a	d	c	d	a
36	37	38	39	40
a	c	d	c	a
41	42	43	44	45
a	d	d	b	a
46	47	48	49	50
a	a	c	c	a
51	52	53	54	55
a	c	c	b	b
56	57	58	59	60
d	d	d	b	b