

MEASURES OF CENTRAL TENDENCY

1. If the difference between mean and mode is 63, then the difference between mean and median will be_____

(a) 63
(c) **21**

(b) 31.5
(d) None of the above

(June 2011)

2. 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
(c) 16

(b) **4**
(d) 40

(June 2011)

3. 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**
(c) 15

(b) 20
(d) 30

(Dec. 2011)

9. The mean salary of a group of 50 persons is Rs. 5,850. Later on it was discovered that the salary of an employee has been wrongly taken as Rs. 8,000 instead of Rs. 7,800. The corrected mean salary is :

- (a) Rs. 5,854
(b) **Rs. 5,846**
(c) Rs. 5,650
(d) None of these

(Dec. 2012)

10. GM of 8, 4, 2 is _____

- (a) **4**
(b) 2
(c) 8
(d) None

(June 2013)

11. The average age of 15 students is 15 years. Out of these the average age of 5 students is 14 years and that of other 9 students is 16 years, then the age of 15th student is

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

(June 2013)

12. 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**

(June 2014)

13. Which of the following statement is true? (June 2014)
- (a) Median is based on all observations
 - (b) The Mode is the mid value
 - (c) **The Median is the 2nd Quartile**
 - (d) The Mode is the 5th decile

14. For two numbers A.M=10 and G.M=8, then H.M=? (Dec. 2014)
- (a) 9
 - (b) 8.9
 - (c) **6.4**
 - (d) None

15. The 3rd decile for the values 15, 10, 20, 25, 18, 11, 9, 12, is (Dec. 2014)
- (a) 13
 - (b) **10.7**
 - (c) 11
 - (d) 11.5

16. The A.M of square of first '2n' natural numbers is (Dec. 2014)
- (a) $\frac{1}{6}(2n+1)(4n-1)$
 - (b) $\frac{1}{6}(2n-1)(4n-1)$
 - (c) $\frac{1}{6}(2n-1)(4n+1)$
 - (d) **$\frac{1}{6}(2n+1)(4n+1)$**

17. If the Harmonic means of two numbers is 4 and Arithmetic mean (A) and Geometric mean (G) satisfy the equation $2A + G^2 = 27$ then the two numbers are:
- (a) (1, 3) (b) (9,5)
(c) **(6, 3)** (d) (12,7)

(June 2015)

18. There were 50 students in a class. 10 failed whose average marks were 2.5. The total marks of class were 281. Find the average marks of students who passed?
- (a) **6.4** (b) 25
(c) 256 (d) 86

(Dec. 2015)

19. If the Arithmetic Mean of two numbers is 30 and Geometric Mean is 24 then what will be those two numbers?
- (a) 36 and 24 (b) 30 and 30
(c) **48 and 12** (d) None of these

(June 2016)

20. The G.M. of observation 40, 50 and x is 10, then find the value of x:
- (a) 1 (b) 5
(c) 2 (d) **1 / 2**

(Dec. 2016)

21. The mean of 10 observations is 14.4. Out of these mean of 4 observations is 16.5, then find the mean of remaining observations:

- (a) 13.6
(c) 13.8
(b) **13**
(d) 12

(Dec. 2016)

22. If the mean of data is 55.6 and the mode is 46, then the median is:

- (a) 50.4
(c) **52.4**
(b) 40.7
(d) None of these

(Dec. 2016)

23. _____ is used for ordering the size of designed cloths:

- (a) Mean
(c) **Mode**
(b) Median
(d) None of these

(Dec. 2016)

24. The mean of 6,4,1,5,6,10 and 3 is 5. If each number is added with 2, then the new mean is.....:

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

(Dec. 2016)

25. The rate of returns from three different shares are 100%, 200% and 400% respectively, the average rate of return will be _____ :
- (a) 350% (b) 200.33%
(c) **200%** (d) 300%

(June 2017)

26. A person purchase 5 rupees worth of eggs from 10 different markets. You are to find average no. of eggs per rupee for all the markets then together. What is the suitable form of average in this case?
- (a) AM (b) GM
(c) **HM** (d) None of these

(June 2017)

27. Which of the following is correct?
- (a) **3 (Mean - Median) = Mean - Mode**
(b) Mean - Median = 3 (Mean - Mode)
(c) Mean - Median = 2 (Mean - Mode)
(d) Mean - Mode = 2 (Mean - Median)

(June 2017)

28. GM = 6, AM = 6.5 then HM =
- (a) $\frac{6^2}{6.5}$ (b) $\frac{6}{6.5}$
(c) $\frac{6.5}{6}$ (d) None of these

(June 2017)

29. A company's past 10 years average earnings was Rs. 40 crores. For obtaining the same average earning for 11 years including these 10 years how much earning (in Rs.) must be made by the company in the 11th year?

- (a) **40 crore** (b) $\frac{40 \times 10}{11}$ crores
(c) More than 40 crores (d) None of these

(June 2017)

30. Mean of 7, 9, 12, x, 4, 11 & 5 is 9. Find the missing observation:

- (a) 13 (b) **15**
(c) 12 (d) None of these

(Dec. 2017)

31. If all the frequencies are equal than which will doesn't exist:

- (a) Mean (b) Median
(c) Mode (d) None of these

(Dec. 2017)

32. _____ is the reciprocal of the AM of reciprocal of observations:

- (a) HM (b) GM
(c) Both (d) None of these

(Dec. 2017)

33. If the mean of the following distribution is 6 then the value of P is

X:	2	4	6	10	P + 5
F:	3	2	3	1	2

- (a) 7 (b) 5
(c) 11 (d) 8

(Nov. 2018)

34. If total frequencies of three series are 50,60 and 90 and their means are 12,15 and 20 respectively, then the mean of their composite series is

- (a) 15.5 (b) 16
(c) 14.5 (d) 16.5

(Nov. 2018)

35. If in a moderately skewed distribution the values of mode and mean are 32.1 and 35.4 respectively, then the value of the median is

- (a) 33.3 (b) 34
(c) 34.3 (d) 33

(Nov. 2018)

36. The median of the data 5, 6, 7, 7, 8, 9, 10, 11, 11, 12, 15, 18, 18 and 19 is

- (a) 10 (b) 10.5
(c) 11.5 (d) 11

(Nov. 2018)

37. The means of 20 items of a data is 5 and if each item is multiplied by 3, then the new mean will be

- (a) 20 (b) 5
(c) 15 (d) 10

(Nov. 2018)

38. The Geometric mean of 3, 6, 24 and 48 is

- (a) 6 (b) 8
(c) 12 (d) 24

(Nov. 2018)

39. The Algebraic sum of the deviation of a set of values from their arithmetic mean is

- (a) >0 (b) $=0$
(c) <0 (d) None of the above

(Nov. 2018)

40. The AM of 15 observations is 9 and the AM of first 9 observations is 11 and then AM of remaining observations is

- (a) 11 (b) 6
(c) 5 (d) 9

(June 2019)

41. In a moderately skewed distribution the values of mean & median are 12 & 18 respectively. The value of mode is

- (a) 6 (b) 12
(c) 15 (d) 30

(June 2019)

42. Which of the following is positional average?

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

(June 2019)

43. For the distribution

X	1	2	3	4	5	6
F	6	9	10	14	12	8

The value of median is

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

(June 2019)

44. For a symmetric distribution
- (a) Mean = Median = Mode (b) Mode = 3 Median - 2 Mean
- (c) Mode = $\frac{1}{3}$ Median = $\frac{1}{2}$ (d) None (June 2019)

45. $\sum_{i=1}^m (x - \bar{x}) = ?$
- (a) 1 (b) 0
- (c) -1 (d) None of these (Nov. 2019)

46. The median of the following frequency distribution is equal to

X:	5	7	9	12	14	17	19	21
Y:	6	5	3	6	5	3	2	4

- (a) 6 (b) 12
- (c) 13 (d) 14 (Nov. 2019)

47. Find median from the following data:

Marks	0-10	10-30	30-60	60-80	80-90
No. of students	5	15	30	8	2

- (a) 8 (b) 30
- (c) 40 (d) 45 (Nov. 2019)

48. Find the mode from the following data:

Class :	3-6	6-9	9-12	12-15	15-18	18-21	21-24
Frequency	2	5	10	23	21	12	3

(a) 23

(b) 13.3

(c) 12.6

(d) 14.6

(Nov. 2019)

49. Find the mode of the following distribution?

Class :	0-7	7-14	14-21	21-28	28-35	35-42	42-49
Frequency	19	25	36	72	51	43	28

(a) 24.3

(b) 25.4

(c) 72

(d) 21

(Nov. 2019)

50. The arithmetic mean of two numbers is 30 and geometric mean is 24 find the two number

(a) 12 and 48

(b) 14 and 46

(c) 10 and 50

(d) 16 and 44

(Nov. 2019)

51. Sum of the squares of deviations is minimum when deviations are taken from

(a) Mean

(b) Median

(c) Mode

(d) An arbitrary value

(Nov. 2019)

52. (Given the weights for the numbers 1, 2, 3, n are respectively $1^2, 2^2, 3^2,$ n^2 Then weighted HM is _____

- (e) $\frac{2n+1}{4}$ (b) $\frac{2n+1}{6}$
(c) $\frac{2n+1}{3}$ (d) $\frac{2n+1}{2}$

(Nov. 2020)

53. Which measure is suitable for open – end classification?

- (a) Median (b) Mean
(c) Mode (d) GM

(Nov. 2020)

54. 50th Percentile is equal to _____

- (a) Median (b) Mode
(c) Mean (d) None

(Nov. 2020)

55. For a distribution Mean, Median and Mode are 23, 24 and 25.5 respectively, then it is most likely _____skewed distribution

- (a) Positively (b) Symmetrical
(c) Asymptotically (d) Negatively

(Nov. 2020)

56. If any two numbers are in AP, then $GM^2 =$ _____
- (a) $AM \times HM,$ (b) $AM + HM$
(c) $M \times Z$ (d) $AM \times M$

(Nov. 2020)

57. Two values yielded an arithmetic mean of 24 and a harmonic mean of 6. The geometric mean of these values is _____
- (a) 8 (b) 12
(c) 14 (d) 16

(Nov. 2020)

58. The HM of A and B is $\frac{1}{3}$ and HM of C and D is $\frac{1}{5}$. Then HM of A, B, C and D is _____
- (a) $\frac{8}{15}$ (b) $\frac{1}{4}$
(c) $\frac{15}{8}$ (d) $\frac{4}{15}$

(Nov. 2020)

59. Which one of these is least affected by extreme values?
- (a) Mean (b) Median
(c) Mode (d) None

(Nov. 2020)

60. A fire engine rushes to a place of fire accident with a speed of 110 kmph and after the completion of operation returned to the base at a speed of 35 kmph. The average speed per hour in per direction is obtained as _____ Speed.

- (a) Avg. of (b) HM of
(c) GM of (d) Half of MH of

(Nov. 2020)

61. Ten matches data is given. Then which of the following cannot be found?

- (a) Least Score (b) Highest Score
(c) Best Score (d) Median Score

(Nov. 2020)

62. If the AM and HM of two numbers are 6 and 9 respectively, then GM is _____

- (a) 7.35 (b) 8.5
(c) 6.5 (d) None

(Nov. 2020)

63. From the records on sizes of shoes sold in a shop, one can compute the following to determine the most preferred shoe size.

- (a) Mean (b) Median
(c) Mode (d) Range

(Jan. 2021)

64. Which of the following measure does not possess mathematical properties?
(a) Arithmetic mean (b) Geometric mean
(c) Harmonic mean (d) Median

(Jan. 2021)

65. If $y = 3 + (4.5)x$ and the mode for x-value is 20, then the mode for y-is
(a) 3.225 (b) 12
(c) 24.5 (d) 93

(Jan. 2021)

66. If there are two groups with n_1 and n_2 observations and H_1 and H_2 are respective harmonic means, then the harmonic mean of combined observation is
(a) $\frac{n_1 H_1 + n_2 H_2}{n_1 + n_2}$ (b) $\frac{n_1 H_1 + n_2 H_2}{H_1 + H_2}$
(c) $\frac{n_1 + n_2}{n_1 H_1 + n_2 H_2}$ (d) $\frac{(n_1 + n_2) H_1 H_2}{n_1 H_2 + n_2 H_1}$

(Jan. 2021)

67. Expenditure of a Company (in Million Rupees) per item in various Years

Year	Item of Expenditures				
	Salary	Fuel and Transport	Bonus	Interest on Loans	Taxes
1998	288	98	3.00	23.4	83
1999	342	112	2.52	32.5	108
2000	324	101	3.84	41.6	74
2001	336	133	3.68	36.4	88
2002	420	142	3.96	49.4	98

What is the average amount of interest per year which the company had to pay during this period?

- (a) 33.66 (b) 36.66
(c) 31.66 (d) 39.66

(July 2021)

68. There are n numbers. When 50 is subtracted from each of these number the sum of the numbers so obtained is -10 . When 46 is subtracted from each of the original numbers, then the sum of numbers, so obtained is 70. What is the mean of the original n numbers?

- (a) 56.8 (b) 25.7
(c) 49.5 (d) 53.6

(July 2021)

69. The mean of ' n ' observation is ' X '. If K is added to each observation, then the new mean is _____

- (a) X (b) XK
(c) $X - K$ (d) $X + K$

(July 2021)

70. 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

(July 2021)

**