

Topic :- STATISTICS

1. Suppose a population A has 100 observations 101,102,....,200 and another population B has 100 observations 151,152,....,250 if V_A and V_B represent the variances of the two

populations respectively, then $\frac{V_A}{V_B}$ is

- a) $\frac{9}{4}$ b) $\frac{4}{9}$ c) $\frac{2}{3}$ d) 1
2. The SD of 15 items is 6 and if each item is decreases by 1, then standard derivation will be
a) 5 b) 7 c) $\frac{91}{15}$ d) 6
3. If the S.D. of a variate X is σ , then the S.D. of $aX + b$ is
a) $|a| \sigma$ b) σ c) $a \sigma$ d) $a \sigma + b$
4. The mean weight of 9 items is 15. If one more item is added to the series, the mean becomes 16. The value of 10th item is
a) 35 b) 30 c) 25 d) 20
5. The mean deviation from the mean of the set of observations, -1, 0, 4 is
a) 3 b) 1 c) -2 d) 2
6. The regression coefficient of y on x is $\frac{2}{3}$ and that of x on y is $\frac{4}{3}$. The acute angle between the two regression lines is $\tan^{-1} k$, where k is equal to
a) $\frac{1}{9}$ b) $\frac{2}{9}$ c) $\frac{1}{18}$ d) $\frac{1}{3}$
7. The mean of the numbers $a, b, 8, 5, 10$ is 6 and the variance is 6.80. Then, which one of the following gives possible values of a and b ?
a) $a = 3, b = 4$ b) $a = 0, b = 7$ c) $a = 5, b = 2$ d) $a = 1, b = 6$
8. The mean-deviation and coefficient of mean deviation from the data. Weight (in kg) 54, 50, 40, 42, 51, 45, 47, 55, 57 is
a) 0.0900 b) 0.0956 c) 0.0056 d) 0.0946
9. The weighted AM of first n natural numbers whose weights are equal to the corresponding numbers is equal to
a) $2n + 1$ b) $\frac{1}{2}(2n + 1)$ c) $\frac{1}{3}(2n + 1)$ d) $\frac{2n + 1}{6}$
10. The median of 10,14,11,9,8,12,6 is
a) 14 b) 11 c) 10 d) 12
11. If \bar{x} is the arithmetic mean of n independent variates $x_1, x_2, x_3, \dots, x_n$ each of the standard derivation σ , then variance (\bar{x}) is
a) $\frac{\sigma^2}{n}$ b) $\frac{n\sigma^2}{2}$ c) $\frac{(n + 1)\sigma^2}{3}$ d) None of these
12. If 25% of the observations in a frequency distribution are less than 2 and 25% are more than 40, then the quartile deviation is

- a) 20 b) 30 c) 40 d) 10
13. Standard deviation for first 10 even natural numbers is
a) 11 b) 7.74 c) 5.74 d) 11.48
14. The AM of the series 1, 2, 4, 8, 16, ..., 2^n is
a) $\frac{2^n - 1}{n}$ b) $\frac{2^{n+1} - 1}{n + 1}$ c) $\frac{2^n + 1}{n}$ d) $\frac{2^n - 1}{n + 1}$
15. The correlation coefficient of two variable x and y is 0.8. The regression coefficient of y on x is 0.2, than the regression coefficient of x on y is
a) 3.2 b) -3.2 c) 4 d) 0.16
16. The values of mean, median and mode coincide, then the distribution is
a) Positive skewness b) Symmetric distribution
c) Negative skewness d) All of the above
17. If $\bar{x} = \bar{y} = 0$, $\sum x_i y_i = 12$, $\sigma_x = 2$, $\sigma_y = 3$ and $n = 10$, then the coefficient of correlation is
a) 0.1 b) 0.3 c) 0.2 d) 0.-1
18. The mode of the series 3,4,2,6,1,7,6,7,6,8,9,5 is
a) 5 b) 6 c) 7 d) 8
19. A data has highest value 120 and lowest value 71. A frequency distribution in descending order with seven classes is to be constructed. The limits of the second classes-interval shall be
a) 71 and 78 b) 78 and 85 c) 113 and 120 d) 106 and 113
20. A group of 10 items has arithmetic mean 6. If the arithmetic mean of 4 of these items is 7.5, then the mean of the remaining items is
a) 6.5 b) 5.5 c) 4.5 d) 5.0

