

## DPP

DAILY PRACTICE PROBLEMS

Class : XIth  
Date :

Subject : MATHS  
DPP No. : 1

### Topic :- STATISTICS

- 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
  - $\frac{9}{4}$
  - $\frac{4}{9}$
  - $\frac{2}{3}$
  - 1
- The SD of 15 items is 6 and if each item is decreases by 1, then standard derivation will be
  - 5
  - 7
  - $\frac{91}{15}$
  - 6
- If the S. D. of a variate  $X$  is  $\sigma$ , then the S.D. of  $aX + b$  is
  - $|a| \sigma$
  - $\sigma$
  - $a \sigma$
  - $a \sigma + b$
- 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
  - 35
  - 30
  - 25
  - 20
- The mean deviation from the mean of the set of observations, -1, 0, 4 is
  - 3
  - 1
  - 2
  - 2
- 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
  - $\frac{1}{9}$
  - $\frac{2}{9}$
  - $\frac{1}{18}$
  - $\frac{1}{3}$
- 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  $b$ ?
  - $a = 3, b = 4$
  - $a = 0, b = 7$
  - $a = 5, b = 2$
  - $a = 1, b = 6$
- The mean-deviation and coefficient of mean deviation from the data. Weight (in kg) 54, 50, 40, 42, 51, 45, 47, 55, 57 is
  - 0.0900
  - 0.0956
  - 0.0056
  - 0.0946
- The weighted AM of first  $n$  natural numbers whose weights are equal to the corresponding numbers is equal to
  - $2n + 1$
  - $\frac{1}{2}(2n + 1)$
  - $\frac{1}{3}(2n + 1)$
  - $\frac{2n+1}{6}$
- The median of 10,14,11,9,8,12,6 is
  - 14
  - 11
  - 10
  - 12
- 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  $\sigma$ , then variance ( $\bar{x}$ ) is
  - $\frac{\sigma^2}{n}$
  - $\frac{n\sigma^2}{2}$
  - $\frac{(n+1)\sigma^2}{3}$
  - None of these
- If 25% of the observations in a frequency distribution are less than 2 and 25% are more than 40, then the quartile deviation is
  - 20
  - 30
  - 40
  - 10
- Standard deviation for first 10 even natural numbers is
  - 11
  - 7.74
  - 5.74
  - 11.48
- The AM of the series 1, 2, 4, 8, 16, ...,  $2^n$  is
  - $\frac{2^n - 1}{n}$
  - $\frac{2^{n+1} - 1}{n+1}$
  - $\frac{2^n + 1}{n}$
  - $\frac{2^n - 1}{n+1}$



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

