DPP
DAILY PRACTICE PROBLEMS

Class : XIth
Date :

Subject : MATHS
DPP No. : 8

Topic :- STATISTICS

1. The means of a set of numbers is $\overline{X}$. If each number is divided by 3, then the new mean is
   a) $\overline{X}$ b) $\overline{X} + 3$ c) $3\overline{X}$ d) $\frac{\overline{X}}{3}$

2. The variance of the data 2, 4, 6, 8, 10 is
   a) 6 b) 7 c) 8 d) None of these

3. If the sum of 11 consecutive natural numbers is 2761, then the middle number is
   a) 249 b) 250 c) 251 d) 252

4. If the two lines of regression are $4x + 3y + 7 = 0$ and $3x + 4y + 8 = 0$, then the means of x and y are
   a) $\frac{-4}{7}, \frac{-11}{7}$ b) $\frac{-4}{7}, \frac{11}{7}$ c) $\frac{4}{7}, \frac{-11}{7}$ d) 4,7

5. The AM of n numbers of a series is $\overline{X}$. If the sum of first $(n-1)$ terms is k, then the nth number is
   a) $\overline{X} - k$ b) $n\overline{X} - k$ c) $\overline{X} - nk$ d) $n\overline{X} - nk$

6. The 7th percentile is equal to
   a) 7th decile b) Q_3 c) 6th decile d) None of these

7. Which of the following is not a measure of central tendency
   a) Mean b) Median c) Mode d) Range

8. The median can graphically be found from
   a) Ogive b) Histogram c) Frequency curve d) None of these

9. Mean of 100 observation is 45. If it was later found that two observations 19 and 31 were incorrectly recorded as 91 and 13. The correct mean is
   a) 44 b) 45 c) 44.46 d) 45.54

10. If the regression coefficients are 0.8 and 0.2, then the value of coefficient of correlation is
    a) 0.16 b) 0.4 c) 0.04 d) 0.164

11. The arithmetic mean of $^nC_0, ^nC_1, ^nC_2, ..., ^nC_n$, is
    a) $\frac{2^n}{n}$ b) $\frac{2^n - 1}{n}$ c) $\frac{2^n}{n+1}$ d) $\frac{2^{n-1}}{n+1}$

12. If there exists a linear statistical relationship between two variable x and y, then the regression coefficient of y on x is
    a) $\frac{cov(x,y)}{\sigma_x \sigma_y}$ b) $\frac{cov(x,y)}{\sigma^2_y}$ c) $\frac{cov(x,y)}{\sigma_x^2}$ d) None of these

13. Mean marks scored by the students of a class is 53. The mean marks of the girls is 55 and the mean marks of the boys is 50. What is the percentage of girls in the class?
    a) 60% b) 40% c) 50% d) 45%

14. The mean age of a combined group of men and women is 25 yr. if the mean age of the group of men is 26 and that of the group of women is 21, then the percentage of men and women in the group is

    a) 46, 60   b) 80, 20   c) 20, 80   d) 60, 40

15. The best statistical measure used for comparing two series is

    a) Mean derivation   b) Range

    c) Coefficient of variation   d) None of these

16. If the mean of n observations 1^2, 2^2, 3^2,...,n^2 is $\frac{46n}{11}$, then n is equal to

    a) 11   b) 12   c) 23   d) 22

17. A batsman scores runs in 10 innings as 38, 70, 48, 34, 42, 55, 63, 46, 54 and 44. The mean deviation about mean is

    a) 8.6   b) 6.4   c) 10.6   d) 7.6

18. The intersecting point of two regression lines is

    a) $(\bar{x},0)$ b) $(0,\bar{y})$ c) (b_{xy}, b_{yx}) d) $(\bar{x},\bar{y})$

19. If the values of regression coefficients are -0.33 and -1.33, then the value of coefficients of correlation between the two variables, is

    a) 0.2   b) -0.66   c) 0.4   d) -0.4

20. In a bivariate data $\Sigma x = 30$, $\Sigma y = 400$, $\Sigma x^2 = 196$, $\Sigma xy = 850$ and $n = 10$. the regression coefficient of y on x is

    a) -3.1   b) -3.2   c) -3.3   d) -3.4