



ST. LAWRENCE HIGH SCHOOL
A JESUIT CHRISTIAN MINORITY INSTITUTION



SOLUTION OF WORKSHEET-22

SUBJECT - STATISTICS

Term : 1st

Topic - Dispersion
Full Marks: 15

Class: XI
Date: 22.08.2020

Q1. Select the correct alternative of the following questions.

- (i) The marks of 7 students in a class test are 1, 2, 4, 7, 8, 11, 11, 13. The standard deviation is
(a) 2 (b) 4 (c) 8 (d) none of these
- (ii) The variance is used to calculate the average of
(a) all values (b) observation in GP (c) observation in AP (d) none of these
- (iii) The marks of 5 students in a class test are 2, 4, 4, 7, 7, 8, 23. The variance is
(a) 2 (b) 4 (c) 11 (d) none of these
- (iv) If all the Observation is equal to $-\frac{1}{7}$, then the standard variance is equal to
(a) 0 (b) $\frac{1}{5}$ (c) -5 (d) none of these
- (v) Variance of $-(2n+3), \dots, -1, 0, 1, \dots, (2n-1)$ is
(a) -1 (b) 0 (c) $\frac{n-1}{2}$ (d) none of these
- (vi) Variance of cast of several people
(a) $n-1$ (b) 0 (c) $\frac{n-1}{2}$ (d) none of these
- (vii) Variance can always be calculated of a set having observation
(a) countably infinite (b) uncountably infinite
(c) uncountably finite (d) none of these

- (viii) If $5x = 9y$ and variance of x is 7, then mean deviation about mean of y is
 (a) 0 (b) 1 (c) 0.5 (d) **none of these**
- (ix) The combined variance depends upon the
 (a) 1st set (b) 2nd set (c) **both** (d) none of these
- (x) The variance is less than the n th part of range of the given sets where n is
 (a) half (b) one third (c) same (d) **one fourths**
- (xi) The variance is greater than the $\frac{1}{2n}$ of the
 (a) mean (b) median (c) mode (d) **range**
- (xii) The standard deviation is greater than the absolute difference between mean and
 (a) gm (b) hm (c) **median** (d) none of these
- (xiii) There are 12 observations with variance 3. If 0.3 is added to all the observations then the standard deviation of the new set is
 (a) 3 (b) 3.3 (c) **30** (d) none of these
- (xiv) There are 10 observations with standard deviation 4. If all the observations be multiplied by 4 then the variance of the new set is
 (a) 4 (b) 8 (c) **16** (d) none of these
- (xv) The observations are 1, 2, 3, 4, 5, 6 then variance is
 (a) 0 (b) 7 (c) 8 (d) **none of these**

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