

Model Question Paper**Statistics - Part II**

10th Standard

MathsReg.No. :

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I. Answer all the questions.

II. Use blue pen only.

Time : 01:00:00 Hrs

Total Marks : 40

5 x 1 = 5

Part-A

- 1) For any collection of n items, $(\sum x) - \bar{x} =$
(a) $n\bar{x}$ (b) $(n-2)\bar{x}$ (c) $(n-1)\bar{x}$ (d) 0
- 2) If t is the standard deviation of x, y, z , then the standard deviation of $x+5, y+5, z+5$ is
(a) $\frac{t}{3}$ (b) $t+5$ (c) t (d) xyz
- 3) If the standard deviation of a set of data is 1.6, then the variance is
(a) 0.4 (b) 2.56 (c) 1.96 (d) 0.04
- 4) If the variance of a data is 12.25, then the S.D is
(a) 3.5 (b) 3 (c) 2.5 (d) 3.25
- 5) Variance of the first 11 natural numbers is
(a) $\sqrt{5}$ (b) $\sqrt{10}$ (c) $5\sqrt{2}$ (d) 10

Part-B

5 x 2 = 10

- 6) Find the range and coefficient of range of the following data. 59, 46, 30, 23, 27, 40, 52, 35, 29
- 7) The smallest value of a collection of data is 12 and the range is 59. Find the largest value of the collection of data.
- 8) The largest of 50 measurements is 3.84 kg. If the range is 0.46 kg, find the smallest measurement.
- 9) The standard deviation of 20 observations is $\sqrt{5}$. If each observation is multiplied by 2, find the standard deviation and variance of the resulting observations.
- 10) Calculate the standard deviation of the first 13 natural numbers.

Part-C

5 x 5 = 25

- 11) For a collection of data, if $\sum x = 35$, $n = 5$, $\sum (x-9)^2 = 82$, then find $\sum x^2$ and $\sum (x-\bar{x})^2$
- 12) The coefficient of variations of two series are 58 and 69. Their standard deviations are 21.2 and 15.6. What are their arithmetic means?
- 13) Calculate the standard deviation of the following data. 10, 20, 15, 8, 3, 4
- 14) Calculate the standard deviation of the following data.

x	3	8	13	18	23
f	7	10	15	10	8

- 15) The mean and standard deviation of 20 items are found to be 10 and 2 respectively. At the time of checking it was found that an item 12 was wrongly entered as 8. Calculate the correct mean and standard deviation.
