

Model Question Paper

Statistics - Part III

10th Standard

Maths

Reg.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) The variance of 10, 10, 10, 10, 10 is
(a) 10 (b) $\sqrt{10}$ (c) 5 (d) 0
- 2) If the variance of 14, 18, 22, 26, 30 is 32, then the variance of 28, 36, 44, 52, 60 is
(a) 64 (b) 128 (c) $32\sqrt{2}$ (d) 32
- 3) Standard deviation of a collection of data is $2\sqrt{2}$. If each value is multiplied by 3, then the standard deviation of the new data is
(a) $\sqrt{12}$ (b) $4\sqrt{2}$ (c) $6\sqrt{2}$ (d) $9\sqrt{2}$
- 4) Given $\sum (x - \bar{x})^2 = 48$, $\bar{x} = 20$ and $n = 12$. The coefficient of variation is
(a) 25 (b) 20 (c) 30 (d) 10
- 5) Mean and standard deviation of a data are 48 and 12 respectively. The coefficient of variation is
(a) 42 (b) 25 (c) 28 (d) 48

Part-B

5 x 2 = 10

- 6) Mean of 100 items is 48 and their standard deviation is 10. Find the sum of all the items and the sum of the squares of all the items.
- 7) If $n = 10$, $\bar{x} = 12$ and $\sum x^2 = 1530$, then calculate the coefficient of variation.
- 8) If the coefficient of variation of a collection of data is 57 and its S.D is 6.84, then find the mean.
- 9) A group of 100 candidates have their average height 163.8 cm with coefficient of variation 3.2. What is the standard deviation of their heights?
- 10) Find the range and coefficient of range of the following data. 41.2, 33.7, 29.1, 34.5, 25.7, 24.8, 56.5, 12.5

Part-D

5 x 5 = 25

- 11) Find the variance of the following distribution

Class interval	20-24	25-29	30-34	35-39	40-44	45-49
Frequency	15	25	28	12	12	8

- 12) Calculate the coefficient of variation of the following data: 20, 18, 32, 24, 26.
- 13) Given $\sum x = 99$, $n = 9$ and $\sum (x - 10)^2 = 79$. Find $\sum x^2$ and $\sum (x - \bar{x})^2$.
- 14) The marks scored by two students A, B in a class are given below.

A	58	51	60	65	66
B	56	87	88	46	43

Who is more Consistent?

- 15) Calculate the standard deviation of the following data. 38, 40, 34, 31, 28, 26, 34
