

B.Sc 1<sup>st</sup> Semester (General) Examination, 2020 (CBCS)

Subject: Statistics

Paper: CC-1/GE-1

**(Statistical Methods)**

Time: 2 Hours

Full Marks: 40

Answer any eight questions:

8 × 5 = 40

1. Distinguish between primary and secondary data. Indicate some sources of both types of data.
2. What is Histogram? What purpose is served by such a graph and what are its uses?
3. Prove that  $A.M \geq G.M \geq H.M$ .
4. If  $s^2$  is the variance of  $n$  given values  $x_1, x_2, \dots, x_n$  of a variable,  $x$ , then prove that 
$$s^2 = \frac{1}{2n^2} \sum_{i=1}^n \sum_{j=1}^n (x_i - x_j)^2$$
5. Find the mean deviation about mean and the standard deviation of the following values:  $a, a + b, a + 2b, \dots, a + nb$ .
6. Establish the relation between central and raw moments.
7. Discuss the different measures of skewness.
8. Prove that Correlation Coefficient lies between -1 and +1.
9. Write a short note on measures of association for attribute data.
10. Distinguish between quantitative and attribute data. When two attributes are said to be independent?