

Descriptive Statistics-I

Question Bank

1. State and prove any three properties of Arithmetic Mean.
2. Distinguish between discrete variable and continuous variable.
3. Write a note on skewness of the distribution.
4. State and prove minimal property of mean square deviation.
5. If a & b any two positive observations find Arithmetic Mean (AM), Geometric Mean (GM), Harmonic Mean (HM). Hence prove that $AM \geq GM \geq HM$.
6. Write a note on kurtosis.
7. Write a note on raw moments and central moments. Also, derive first four moments of each.
8. Define arithmetic mean and derive the formula for mean of pooled data. (For two data set only).
9. Define any two absolute measures and relative measures of dispersion.
10. Explain nominal and ordinal scale.
11. Define: (1) Range, (2) Quartile Deviation, (3) Mean Deviation, (4) Standard Deviation, (5) Coefficient of Variation.
12. Define arithmetic mean. Show that it is affected by change of origin and scale.
13. Express first four central moments in terms of raw moments.
14. Show that sum of deviation of observations taken from arithmetic mean is zero.
15. Define median. How it is determined by graphically.
16. Define mode. How it is determined by graphically.
17. Explain qualitative and quantitative data.
18. Explain primary and secondary data.
19. Find arithmetic mean of the values 1, 2, 3, ..., n
20. With usual notation show that, $\bar{x}_c = \frac{n_1\bar{x}_1 + n_2\bar{x}_2}{n_1 + n_2}$