



NP – 101

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I Semester B.Sc. Examination, May 2022  
(NEP) (2021-22 and Onwards)  
**STATISTICS**  
**ST 101 : Descriptive Statistics**



Time : 2½ Hours

Max. Marks : 60

- Instructions :** 1) *Scientific calculators are permitted.*  
2) *Statistical tables and graph sheets are provided on request.*

PART – A

Answer **any four** questions (2 marks each) : (2×4=8)

1. Distinguish between attribute and variable.
2. Define Geometric mean and Harmonic mean.
3. What do you mean by Skewness and Kurtosis ?
4. Distinguish between positive correlation and negative correlation.
5. Define coefficient of determination and coefficient of correlation.
6. Define odds ratio and relative risk.

PART – B

Answer **any four** questions (5 marks each) : (5×4=20)

7. Define primary and secondary data. Mention the sources of secondary data.
8. Define Median and Mode. Mention their merits and demerits.
9. Establish the relationship between raw moments and central moments.
10. Explain types of correlation between two variables with example.
11. Explain the method of fitting exponential curve.
12. Explain multiple correlation and partial correlation.

P.T.O.



## PART - C

Answer **any four** questions (8 marks each) :

(8×4=32)

13. a) Briefly explain cluster sampling.  
b) Explain various types of data with example. (3+5)
14. a) For any two positive numbers show that  $GM = \sqrt{AM \times HM}$ .  
b) Define Mode. How do you locate mode value graphically? (4+4)
15. a) Distinguish between variance and mean square deviation. Show that variance is less than or equal to mean square deviation.  
b) Show that  $\beta_1$  and  $\beta_2$  are independent of change of origin and scale. (4+4)
16. Show that the correlation coefficient between ranks of observation is given by  $1 - \frac{6 \sum_{i=1}^n d_i^2}{n^3 - n}$ . 8
17. Using the method of least square obtain estimates of parameters of simple linear regression. 8
18. Obtain the estimates of parameters of trivariate linear regression equation. 8