

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai — 600 044.

B.Sc. END SEMESTER EXAMINATIONS NOVEMBER-2022

SEMESTER - V

20USTCT5011 - Regression Analysis

Total Duration : 2 Hrs 30 Mins.

Total Marks : 60

Section A

Answer any **SIX** questions ($6 \times 5 = 30$ Marks)

1. State the properties of multiple correlation coefficient.
2. Describe various types of transformations used for modelling.
3. State the properties of least square estimator in multiple linear regression model.
4. Explain in detail about testing a subset of regression coefficient equal to zero.
5. List the assumptions of simple linear regression model.
6. Write a note on effects of outliers in linear regression model.
7. Describe in detail about generalized least squares.
8. Write the assumptions on error term in linear regression model.

Section B

Answer any **THREE** questions ($3 \times 10 = 30$ Marks)

9. Obtain the formula for $R_{1.23}$.
10. Derive least square estimators of simple linear regression model.
11. Write a note on residual plots.
12. Describe multiple linear regression model with suitable example.
13. Discuss the procedure to test the equality of regression coefficients.

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