

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.

M.Sc.Biostatistics - END SEMESTER EXAMINATIONS APRIL - 2024

SEMESTER - II

21PBSCT2005- Applied Regression Analysis

Total Duration : 2 Hrs. 30 Mins.

Total Marks : 60

Section B

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

1. Estimate σ^2 in Simple Linear Regression Model.
2. Explain Durbin – Watson Test for Auto Correlation.
3. Outline the properties of Weighted Least Squares.
4. Summarize Forward Selection Procedure in Step Wise Regression.
5. Estimate Error variance of Multiple Linear Regression.
6. Outline the detection on Outliers.
7. Describe Coefficient of Determination.
8. Evaluate the prediction Interval of Multiple Linear Regression Model.

Section C

I - Answer any **TWO** questions ($2 \times 10 = 20$ Marks)

9. Construct the least square estimators of the parameters of Simple Linear Regression Model.
10. Design Residual Plots for Model Adequacy Checking.
11. Construct transformations to linearize the Model.
12. Summarize the Effects of Multicollinearity.

II - Compulsory question ($1 \times 10 = 10$ Marks)

13. Estimate the least square parameters of Multiple Linear Regression Model.
