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. - END SEMESTER EXAMINATIONS NOVEMBER - 2022
SEMESTER - III
20PBSCT3009 - Survival Analysis

Total Duration : 2 Hrs 30 Mins.   **Total Marks : 60**

Section A

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

1. Illustrate about Censoring mechanism and truncations with example.

2. Describe about reduced sample method

3. Prepare and give the steps involved in Tarone - Ware tests

4. Describe about PH assumptions

5. Explain about Accelerated failure time model

6. Prepare a note about actuarial estimator

7. Describe about Mantel - Haentzel Test

8. Examine Semi-parametric regression for failure rate in detail.

Section B

Part A

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

9. Explain about Mean and median residual life and their elementary properties.

10. Compute Failure rate for Weibull, Pareto and Lognormal distribution.

11. Distinguish between Nelson-Aalen and Kaplan-Meier Estimator.

12. Asses the steps involved in Gehan Test and Log rank test.

Part B

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

13. Examine Cox's proportional hazards model with one and several covariates in detail.

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