

Roll.No.

20USTCT2003

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.Statistics - END SEMESTER EXAMINATIONS - NOVEMBER 2025
SEMESTER - II

20USTCT2003 -Distribution Theory-I

Total Duration : 2 Hrs.30 Mins.

Total Marks : 60

Section B

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

1. Derive the mean and variance of discrete uniform distribution.
2. Examine the memory less property of geometric distribution.
3. Explain the apporximation of Hyper-geomtric distribution to binomial distribution.
4. Find the mgf, cgf and characteristic function of normal distribution.
5. Derive the mode of poisson distribution.
6. Identify the mean and variance of negative binomial distribution.
7. Find the mgf of mulitnonial distribution.
8. Determine the mean and variance of Continuous uniform distribution.

Section C

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

9. Derive the mode of binomial distribution.
10. Evaluate the mean and variance of poisson distribution.
11. Derive the recurrence formula for negative binomial distribution.
12. Derive the mean and variance of Hyper-geomtric distribution.
13. Determine the first four moments of normal distribution.
