

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 APRIL-2023

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 moment generating function of discrete uniform distribution.
2. Explain about memory less property of geometric distribution.
3. Compute the moment generating function of Multinomial distribution.
4. Describe about the linear combination of Normal variates.
5. Explain about the additive property of Poisson distribution.
6. Compute moment generating function of Negative binomial distribution.
7. Explain about Binomial Approximation to the Hyper-geometric Distribution.
8. Determine the mean and variance of Continuous Uniform Distribution.

Section C

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

9. Obtain the mean, variance, mode of Binomial distribution.
10. Compute the moment generating function and cumulative generating function of Poisson Distribution.
11. Determine mean and variance of Negative Binomial distribution.
12. Compute the mean and variance of Hyper-geometric distribution.
13. Determine the moment generating function and characteristic function of Normal Distribution.
