Semester	**TWO**
Paper Number	**C1ST230222T / C1ST230222P**
Paper Title	**Probability and Probability Distributions II**
No. of Credits	**Theory(3)+Practical(1) = 4 Credits**
Theory/Composite	**Composite**
No. of periods assigned	Th: 3 Pr: 2
Modules	Single
Course description/objective	*At the end of the course a student should* ○ Genesis and characteristics of discrete theoretical distributions. ○ Applications of discrete theoretical distributions. ○ Genesis and characteristics of continuous theoretical distributions. ○ Applications of continuous theoretical distributions. ○ Genesis and characteristics of bivariate theoretical distributions. ○ Applications of bivariate theoretical distributions ○ Understand Probability Inequalities.
syllabus	Unit 1: Standard Univariate Discrete Probability Distributions: Binomial, Poisson, Geometric, Negative Binomial, Hypergeometric, Uniform. [14L] Unit 2: Standard Univariate Continuous Probability Distributions: Rectangular, Normal, Exponential, Cauchy, Beta, Gamma, Lognormal, Logistic, Double Exponential and Pareto along with their properties and limiting/approximation cases. [16L] Unit 3: Standard Bivariate Probability Distributions: Trinomial and Bivariate Normal. [6L] Unit 4: Probability Inequalities: Markov & Chebyshev [3L]
Reading/Reference Lists	1. Hogg, R.V., Tanis, E.A. and Rao J.M. (2009): Probability and Statistical Inference, Seventh Ed, Pearson Education, New Delhi. 2. Miller, Irwin and Miller, Marylees (2006): John E. Freund's Mathematical Statistics with Applications, (7th Edn.), Pearson Education, Asia. 3. Myer, P.L. (1970): Introductory Probability and Statistical Applications, Oxford & IBH Publishing, New Delhi . 4. S.M. Ross : A First Course in Probability. 5. K.L. Chung : Elementary Probability Theory with Stochastic Process. 6. https://youtu.be/TvkdX6Dw994

Evaluation	**Theory** CIA:15 Semester Exam: 45	**Practical** CA: 40 Semester Exam: NA
Paper Structure for End Sem Examination	5 Marks Questions	15 Marks Questions
	3 out of 5	2 out of 3