

[LJ 1016]

OCTOBER 2016

Sub. Code: 2861

**M.Sc. BIOSTATISTICS EXAMS
FIRST YEAR
PAPER I – PROBABILITY AND DISTRIBUTION THEORY**

Q.P. Code: 282861

Time: Three hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Convergence in probability, almost sure convergence and convergence in distribution.
2. Applications of t-distribution.

II. Write notes on:

(10 x 6 = 60)

1. Definition of probability and discrete probability space.
2. Addition property of characteristic function.
3. Hypergeometric distribution with its mean and variance.
4. Moment generating function and its properties.
5. Central limit theorem.
6. Characteristic function and inversion theorem.
7. Logistic and lognormal distribution.
8. Memory less property of exponential distribution.
9. Additive property of bivariate normal distribution.
10. Distributions of quadratic forms.
