

[LI 0416]

APRIL 2016

Sub. Code: 2861

**M.Sc., NON – MEDICAL DEGREE COURSES  
BRANCH II - BIOSTATISTICS  
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. Holder's and Jensen's inequality.
2. Logistic and Log normal Distribution.

**II. Write notes on:**

**(10 x 6 = 60)**

1. Applications of Poisson Distribution.
2. Properties of Characteristic function.
3. Conditional and Marginal distribution.
4. Chebychev's Inequality.
5. Properties of Expectation.
6. Gamma and Beta Distribution.
7. Properties of Normal Distribution.
8. Mahalanobis  $D^2$  statistic.
9. Chi Square Distribution.
10. Distribution of Quadratic forms.

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