

[LN 1018]

OCTOBER 2018

Sub. Code: 2861

M.Sc. BIOSTATISTICS EXAMS
FIRST YEAR
(New Regulation)
PAPER I – PROBABILITY AND DISTRIBUTION THEORY

Q.P. Code: 282861

Time: Three hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. a) Define random variable.
b) Define distribution function of a random variable and prove any two of its properties.
c) State and prove Addition theorem of expectation.
2. a) Calculate mean, standard deviation, moment coefficient of skewness and coefficient of kurtosis of a binomial distribution if the number of trials is 18 and probability of success is $1/3$.
b) Obtain the inter relationship between t.F.Chi-square distribution.

II. Write notes on:

(10 x 6 = 60)

1. Tchebechev's inequality.
2. Convergence in probability.
3. Inversion formula.
4. Mean and variance of Geometric distribution.
5. Characteristics of Normal distribution.
6. Multivariate normal distribution.
7. Partial and multiple correlation coefficients.
8. Cochran's theorem.
9. Wishart distribution and generalized T^2 statistic.
10. Application of poisson distribution in the field of Bio-statistics.
