M.Sc. BIOSTATISTICS EXAMS
FIRST YEAR
PAPER III – STATISTICAL INFERENCE, SAMPLING METHODS AND SAMPLE SIZE

Q.P. Code: 282863

Time: Three hours   **Maximum: 100 Marks**

I. Elaborate on: **(2 x 20 = 40)**

1. a) Confidence interval for mean and variance of normal distribution.
   b) Let x_i's, i=1,2,……,n is a random sample from the distribution.
      $f(x,\theta)=\exp(-(x-\theta))$, $0<x<\infty$; $-\infty<\theta<\infty$. Obtain sufficient statistic for θ.

2. Types of probability and non-probability sampling.

II. Write notes on: **(10 x 6 = 60)**

1. BLUE.
2. Method of moments.
3. Likelihood ratio.
4. Test of independence of attributes.
5. SPRT.
6. Advantageous of sampling.
7. Variance of sample mean of stratified sampling.
8. Cluster sampling.
9. Ratio and regression estimate.
10. Double sampling.

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