SARASWATHI NARAYANAN COLLEGE
(Autonomous Institution Affiliated to Madurai Kamaraj University)
(Reaccredited with Grade 'B' by NAAC)
Madurai – 625 022.
M.Sc., Statistics –Summative Examinations – April 2024

Code: **LPSTSC22** **Semester: II**

OREDR STATISTICS

Duration: 2 Hrs. **Max: 50 Marks**

SECTION – A **5 x 1 = 5**

I. Answer ALL questions. Choose the correct answer.(Level 2)

1. The cumulative distribution function of a random variable involving parameter θ is --------

   a) F*(y;* θ) b) *F(y;* θ^2)

   c) *F(y;* θ^4) d) none of these

2. The probability mass function of geometric distribution is----------

   a) $f(x) = (l-p)p\ x$ b) *f(x) = (l-p)p x -y*

   c) $f(x) = (l-p)p\ xy$ d) none of these

3. The exponential distribution is a ---------- distribution.

   a) continuous b) discrete

   $c)$ $both\ (a)\ and\ (b)$ d) none of these

4. The cumulative distribution function is usually denoted by----------

   a) f(x) b) r(x)

   c) F(x) d) All the above

5. MVUE explanation is----------

   a) Maximum Variance Unbiased Estimator

   b) MinimumVariance Unbiased Estimator

c) Minimum Variance Unequally Estimator

d) none of these

II. Fill in the blanks (Level 1) **5 x 1 = 5**

6. The smallest order statistic is denoted by----------

7. The joint Probability mass function of order statistics is----------

8. The variance of Poisson distribution is ----------

9. Fn:n(x) = ----------

10. MLE explanation ----------

SECTION-B **5 x 2 = 10**

Answer all the questions.

11. Define order statistics. K2

12. Define Bernoulli distribution. K2

13. Write the mean and variance of uniform distribution. K3

14. Discover the moments of order statistics. K4

15. Define goodness of fit. K5

SECTION-C **3 x 10 = 30**

Answer any THREE questions.

16. Explain the joint distribution of order statistics. K1

17. Explain the single order statistic. K2

18. Describe the normal distribution. K3

19. Categorize the some identities and recurrence relations. K4

20. Describe the prediction order statistics. K6