TELANGANA UNIVERSITY

SSR DEGREE COLLEGE (AUTONOMOUS)

Internal Assessment Test – II | I Year (SEM – II)

Name: **Subject:** Statistics-II

Roll No:

Group : MSDS & AI.ML **Max. Marks:**

I. Choose the correct Answers. (10 × 1/2 = 5 M)

1. Limits of beta dist. -1 kind [ ]
   a) (0, 1) b) (0, a) c) (a, 0) d) None
2. The parameters of cauchy dist. [ ]
   a) (μ, λ) b) (0, 1) c) (σ, σ^2) d) (μ, 0)
3. Distribution function of exponential dist. [ ]
   a) $e^{-\lambda x}$ b) $1 - e^{-\lambda x}$ c) $1 + e^{-\lambda x}$ d) None
4. Group of items or things or individuals are called [ ]
   a) sample b) constant c) population d) None
5. In gamma dist. Mean and variance are [ ]
   a) equal b) not equal c) > d) None
6. The standard cauchy variate z = _____ [ ]
   a) (x + μ) / σ b) (x + μ) / σ c) (x - μ) / λ d) None
7. M.G.F of Gamma dist. Mx(t) = _____ [ ]
   a) $(1 - it)^{-l}$ b) $(1 - t)^{l}$ c) $(1 - it)^{l}$ d) $(1 - t)^{-l}$
8. Mean of t disribution_____ [ ]
   a) 0 b) 1 c) 2 d) m / (m + n)
9. Mean of beta dist. of 2nd kind _____ [ ]
   a) m / (n - 1) b) m / (n + 1) c) (n - 1) / n d) None
10. Harmonic mean of beta dist. of second kind _____[ ]
    a) (m - 1) / n b) n / (m - 1) c) (m + 1) / n d) None

II. Fill in the blanks (10 × 1/2 = 5 M)

1. Population constants are called _____
2. Sample characteristics are called _____
3. The probability distribution function of exponential dist., f(x) =
   _____
4. The probability distribution function of Gamma dist. (one parameter)
   _____
5. The probability distribution function of Gamma dist. (two parameters)
   _____
6. The mean of Beta-1 kind _____
7. The probability distribution function of Beta-2 kind, f(x) =
   _____
8. The probability distribution function of Cauchy distribution
   _____
9. The probability distribution function of standard Cauchy dist.
   _____
10. The probability distribution function of standard normal dist.
    _____

III. Answer the following questions (2 × 5 = 10 M)

1. Find the dist. function of Rectangular?
   OR
2. Find the dist. function of exponential dist.?
3. Write any applications and properties of t-distribution?
   OR
4. Define chi-square distribution? And state its properties?