B.Sc DEGREE EXAMINATION, EVEN SEMESTER 2021
II Year III Semester
Distribution Theory - II

Max.marks :25

Answer any **FIVE** questions $(5 \times 5 = 25)$ Marks

1. Derive β_1 and β_2 of Beta distribution of First Kind.
2. If X~N (μ, σ^2), obtain the PDF of $U=\frac{1}{2}[(x-\mu)/\sigma]^2$.
3. Derive the characteristic function and cumulant generating function of standard Laplace distribution.
4. Derive the student's t- distribution
5. Derive MGF and cumulant generating function of chi-square distribution.
6. Derive r^{th} moment about origin of F-Distribution and also obtain first two moments.
7. Define order Statistic and Derive the first order statistic