**IV SEM COMP.Sc/IT**

**IV ASSIGNMENT**

1. Find the mgf of the random variable x which is uniformly distributed over (-a,a). Evaluate .
2. Suppose that the random variable X has the pdf .
3. Obtain the mgf of X. (ii) Using mgf find E(X) and V(X).
4. If  where  then show that .
5. Obtain the mgf of Chi-suare distribution and hence find the mean and variance.
6. Define Cauchy’s distribution. If X has Cauchy’s distribution then show that 1/X also has the same distribution.
7. If  what is the pdf of .Obtain the mgf of Y.
8. Let (X,Y) be a two dimensional continuous random variable having the joint pdf . Find the pdf of 
9. Find the mgf of binomially distributed random variable with parameters n and p.
10. Let X have uniform distribution over the interval (-π/2, π/2). Obtain the pdf of Y where Y = tan X.
11. If X1 and X2 are two independent random variables having standard normal distribution find the pdf of .