Exercise 1:

Let Ybe a random variable with normal distribution with mean (μ =2), and standard deviation (σ = 1). Let J(t) = Y **I[1,∞)(t)**. (**I =**1 in the interval **[1,∞),** and 0 otherwise). Define a new random variable L by putting that L is equal to integral from minus infinity to plus infinity **e^t dJ(t).** Compute the expectation of L.