The generalized exponential distribution is a two parameter distribution. This distribution is becoming increasingly useful in many branches of science specially related to semi-infinite reservoir model. Generalized distributions are becoming increasingly evident and useful in many branches of science but the functional forms of these generalized distributions are often complicated. Therefore, there arises a need to have some simplified or approximated form of this generalized distribution and also to know their relations with other distributions. Here we approximated the generalized exponential distribution by using different techniques and suggested the best approximation. We also derived the standard normal approximation of generalized exponential distribution. The results are intended to fill a conspicuous gap in the mathematical and statistical literature concerning the empirical quality of the approximations, and they are useful for designing efficient and accurate computing algorithms for such probabilities. (Received September 17, 2013)