List of Notations

\(X(Y)\)  
Strength (Stress)

\(Z_k\)  
Augmented strength under generalized case of ASP

\(k\)  
Stands for \(k^{th}\) (1,2,3) case of ASP

\('m'\)  
No. of times the strength is multiplied (positive real valued constant)

\('n'\)  
No. of items to be added in the existing equipment (positive integer valued constant)

\(R_k\)  
Augmented strength reliability for generalized case of ASP

\(R_{s,k}\)  
Reliability in a multicomponent stress-strength system

\(\gamma(\lambda, \alpha x)\)  
Lower incomplete gamma function

\(\Phi(.)\)  
CDF of standard normal distribution

\(\Phi(.) = 1 - \Phi(.)\)  
Survival function of standard normal distribution

\(erf(.)\)  
Error function

\(erfc(.)\)  
Complementary error function

\(Z_k\)  
Vector of \(z_{ki}; Z_k = \{Z_{k1}, Z_{k2}, \ldots, Z_{kn}\}\)

\(Y\)  
Vector of \(y_j; Y = \{Y_1, Y_2, \ldots, Y_{n_2}\}\)

\(n_1\)  
Sample size of sample drawn from augmented strength random variable

\(n_2\)  
Sample size of sample drawn from stress random variable