PES UNIVERSITY, Bangalore

(Established under Karnataka Act No. 16 of 2013)

Department of Computer Science & Engineering

Statistics for Data Science

Assignment – Linear Functions of Random Variables

1. Choose any **example of your own** for exploring linear transformation and elaborate the following based on it.

   a. Adding a constant
   b. Subtracting a constant (self- study)
   c. Multiplying a constant
   d. Dividing a constant (self – study)

   After exploring the example, answer the following.

   a. How linear transformations affect the mean and standard deviation of a distribution as well?
   b. How does adding or subtracting a constant affect the mean and standard deviation?
   c. How does multiplying and dividing a constant affect the mean and standard deviation?