

P R E F A C E

This dissertation consists of three chapters. The first chapter is introductory which surveys the historical background and incorporates a few relevant basic concepts from the earlier work. In chapter two we have studied the probability distribution of the sum of two independent random variables whose probability density is taken in terms of the hypergeometric function ${}_2F_1$ [·]. Secondly we have studied the sum of two independent random variables whose probability density is taken in terms of the H-function. We have also presented a problem on the probability distribution of the sum of two independent random variables one of which is characterized by the uniform density and the other by some theoretical density. In chapter three we have introduced some multivariate joint probability density functions which are of an implicit type. Every chapter is divided into sections which are 1.1, 1.2 etc. Hence 2:2 means the second section in chapter two. The equations are numbered within the section and are put within brackets. Hence (3.1.2) means second equation in section 3.1.

References to the literature that have been used in this work are given at the end of this dissertation in an alphabetical order. In the text these have been referred to by putting within square brackets the serial number of the reference and, wherever possible, the page number of the book or research paper, e.g. [13. p.69] means page 69 of the 13th reference.