

PREFACE

The present dissertation is the outcome of the work carried out by me in the field of "INTEGRAL TRANSFORMS OF GENERALIZED FUNCTIONS".

This dissertation consists of three chapters each divided into some sections. The first chapter is devoted to the historical survey of Integral Transforms, Generalized Functions and Generalized Integral Transformations.

In the second chapter, the suitable testing function spaces $H_{a,b,\lambda,\mu}$ which contain the kernel function of the two-dimensional Hankel type transformation, have been constructed. The properties of these spaces and their dual spaces have been also investigated. Two-dimensional Hankel type transformation has been extended to a certain class of generalized functions. Analyticity Theorem and Boundedness Theorem have been proved for the generalized Hankel type transformation.

The third chapter represents the inversion formula and uniqueness theorem for the generalized two-dimensional Hankel type transformation.

A triple numbering system is used for all lemmas, theorems and formulae. For example, (3.2-1) denotes the first formula of the second section in the third chapter. References are given

at the end of each chapter and they are arranged in the alphabetical order. In the text, they have been referred to, by putting within rectangular brackets the serial numbers of the references. Thus [2, p.140] means the page 140 of the second reference.