PREFACE

The Dissertation entitled **"SOME FIXED POINT THEOREMS AND THEIR APPLICATIONS"** consists of four chapters.

Chapter - I is introductory. In this chapter we have explained some basic concepts, methods alongwith brief survey of some major developments of Fixed Point Theorems and their Applications which are needed for our investigations.

Chapter - II covers the study of some Fixed Point Theorems in complete metric spaces. This chapter has been divided into two sections. In Section-I we establish two Fixed Point Theorems for a pair of continuous self mappings in complete metric spaces. In Section-II we prove four Fixed Point Theorems, in which two theorems are on common Fixed Points for a sequence of mappings in complete metric spaces. Out of remaining other two : one theorem for family of mappings and other for non-expansive mapping in complete metric spaces.

Chapter - III is devoted to study four Fixed Point Theorems in normed spaces and Banach Spaces. This chapter consists of two Sections. In Section-I, by using the Mann iteration proceedure, we have proved two Fixed Point Theorems in normed spaces. One of

them for self map and the other for a pair of mappings. In Section-II we have presented two Fixed Point Theorems, in Banach Spaces, One for geralized contraction and the other for a pair of mappings in Banach Spaces.

Chapter - **IV** deals with the study of a Fixed Point Theorem for non-expansive mapping in Hilbert Space by using Ishikawa iteration scheme.

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