PREFACE

The present dissertation is mainly based on the research papers read by me at the various conferences of the Indian Mathematical Society and the National Academy of Sciences, India. Except theorem (3.4.1), all the results from chapter II to chapter VII, as also the results of chapter X have been published, some in the Bulletin of the Calcutta Mathematical Society and others in the Proceedings of the National Academy of Sciences, India. The results of the remaining two chapters viz., VIII and IX have been accepted for publication and are to appear shortly. The reprints of the published papers are attached in the Appendix.

One paper entitled "On Some Integrals Involving Legendre Function, Associated Legendre Function And Jacobi Polynomials" and published in the Bulletin of the Calcutta Mathematical Society, Vol. 48, No. 2., has been prepared jointly with Dr. Bhonsle. This has not been included in the thesis but is attached in the appendix.

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