## CERTIFICATE

This is to certify that Mr. Nirmalya Sinha, a candidate for the award of degree of Doctor of Philosophy of M. S. University of Baroda, has worked under my guidance for the period required by this university and that the accompanying thesis, which he is submitting, is his own work.

( Y. K. Agrawal )

M.Sc., Ph.D., D.Sc., D.Sc., F.N.A.Sc., F.R.I.C., F.C.S., F.S., F.I.C.