DECLARATION BY THE CANDIDATE

I, Ajit Kumar Singh, certify that the work embodied in this thesis is my own bonafide work and carried out by me under the supervision of Dr. Subir Das from July, 2013 to June, 2017 at the Department of Mathematical Sciences, Indian Institute of Technology (BHU), Varanasi. The matter embodied in this thesis has not been submitted for the award of any other degree/diploma. I declare that I have faithfully acknowledged and given credits to the research workers wherever their works have been cited in my work in this thesis. I further declare that I have not willfully copied any other's work, paragraphs, text, data, results, *etc*., reported in journals, books, magazines, reports dissertations, theses, *etc*., or available at websites and have not included them in this thesis and have not cited as my own work.

Date :
Place : Varanasi   **(Ajit Kumar Singh)**

CERTIFICATE BY THE SUPERVISOR

It is certified that the above statement made by the student is correct to the best of my knowledge.

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