DECLARATION BY THE CANDIDATE

I, **SHUBHAM JAISWAL**, certify that the work embodied in this thesis is my own bona fide work and carried out by me under the supervision of **Dr. SUBIR DAS** from a period **July 2013 to January 2018** at **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 wilfully 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   (SHUBHAM JAISWAL)

CERTIFICATE FROM THE SUPERVIS OR/CO-SUPERVISOR

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

(Subir Das)   **(L. P. Singh)**
Professor   Professor and Head
Department of Mathematical Sciences   Department of Mathematical Sciences
Indian Institute of Technology   Indian Institute of Technology
(Banaras Hindu University)   (Banaras Hindu University)
Varanasi- 221005   Varanasi- 221005