

CANDIDATE'S DECLARATION

I, **Priyanka**, certify that the work embodied in this **Ph.D.** thesis is my own confidence work carried out by me under the supervision of **Prof. Shri Ram** and co-supervision of **Prof. L. P. Singh** for a period of September 2011 to January 2015 at Department of Mathematical Sciences, Indian Institute of Technology (BHU), Varanasi. The matter embodied in this **Ph.D.** thesis has not been submitted for the award of any other degree/diploma.

I declare that I have faithfully acknowledged, given credit to and referred to the research workers whenever their works have been cited in the text and the body of the thesis. I further certify that I have not willfully lifted up some other's work, para, text, data, results, etc. reported in the journals, books, magazines, reports, dissertations, theses, etc., or available at web-sites and included them in this **Ph.D.**thesis and cited as my own work.

Date:

Place: Varanasi

(**Priyanka**)