

CANDIDATE'S DECLARATION

I, **Savita Chandel**, certify that the work embodied in this Ph. D. thesis is my own confide work carried out by me under the supervision of **Prof. Shri Ram** and co-supervision of **Prof. L. P. Singh** for a period from September 2011 to March 2015 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, 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, thesis, etc., or available at web-sites and included them in this Ph. D. thesis and cited as my own work.

Date

Place: Varanasi

(**Savita Chandel**)