

CANDIDATE'S DECLARATION

I, ***Sanjay Kumar Srivastava***, certify that the work embodied in this Ph. D. thesis is my own bonafide work carried out by me under the supervision of ***Prof. Prabhat Kumar Singh Dikshit*** and co-supervision of ***Dr. Rajesh Kumar***, for a period of four year and two months from July, 2011 session to August, 2015 in the Department of Civil Engineering, Indian Institute of Technology (Banaras Hindu University), 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 wherever their works have been cited in the text and the body of the thesis. I further certify that I have not wilfully 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: IIT (BHU), Varanasi

(Sanjay Kumar Srivastava)