

CANDIDATE'S DECLARATION

I, **Priyanka Singh**, certify that the work embodied in this Ph.D. thesis is my own bonafide work carried out by me under the supervision of **Prof. R. M. Banik** and the co-supervision offor a period of **4 years and 3 months** from **July 2009 to October 2013** at Banaras Hindu University and School of Biochemical Engineering, Indian Institute of Technology, (BHU). 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 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: 06/11/2013

(Signature of the candidate)

Place : Varanasi

(PRIYANKA SINGH)

Certificate from the Supervisor/Co-supervisor

This is to certify that the above statement made by the candidate is correct to the best of my/our knowledge.

(External Co-supervisor's signature,
Name & Designation)

(External Supervisor's signature,
Name & Designation)

(Co-supervisor's signature,
Name & Designation)

(Supervisor's signature,
Name & Designation)

(Signature of the HOD/Coordinator of the School with seal)

