

CANDIDATE'S DECLARATION

I, Mr. Anuj Shrivastav, certify that the work embodied in this Ph.D. thesis is my own bonafide work carried out by me under the supervision of Dr. Shiru Sharma for a period of about 4 years and 8 months from September 2011 to May 2016 at School of Biomedical 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 willfully lifted up some other's work, paragraph, 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

(Anuj Shrivastav)

CERTIFICATE FROM THE SUPERVISOR

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

Supervisor Signature

Dr. Shiru Sharma

(Assistant Professor)

Signature of the Coordinator

School of Biomedical Engineering

IIT (BHU), VARANASI