

DECLARATION BY THE CANDIDATE

I, “**V Raghunath Chelluboyana**”, certify that the work embodied in this thesis is my own bona fide work and carried out by me under the supervision of “**Prof. Monoj Kumar Mondal**” from “**September 2012**” to “**July 2017**”, at the Department of “**Chemical Engineering & Technology**”, **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 and given credits to the research workers wherever their works have been cited in my work in this thesis. I further declare that I have not willfully copied any other's work, paragraphs, text, data, results, etc., reported in journals, books, magazines, reports dissertations, theses, etc., or available at websites and have not included them in this thesis and have not cited as my own work.

Date:

Place:

(**V Raghunath Chelluboyana**)

CERTIFICATE FROM THE SUPERVISOR(S)

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

(**Prof. Monoj Kumar Mondal**)

Supervisor

Signature of Head of Department/Coordinator of School