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## DEPARTMENT OF METALLURGICAL ENGINEERING

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## UNDERTAKING BY THE CANDIDATE

I, **M. Raviathul Basariya**, certify that the work embodied in the present thesis is my own work carried out by me under the supervision of **Professor N.K. Mukhopadhyay** and **Dr. S. Srikanth** for a period of five years and eleven months from **July 2009** to **June 2015** at the Department of Metallurgical Engineering, Indian Institute of Technology (Banaras Hindu University), Varanasi. The matter embodied in the thesis has not been submitted for the award of any other degree or diploma.

(**M. Raviathul Basariya**)



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## CERTIFICATE FROM THE SUPERVISORS

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

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# COURSE/COMPREHENSIVE EXAMINATION/PRE-SUBMISSION SEMINAR COMPLETION CERTIFICATE

This is to certify that Mrs. **M. Raviathul Basariya**, a bonafide research scholar of this Department, has satisfactorily completed the course work, comprehensive examination and pre-submission seminar requirements which are a part of her Ph.D. programme.

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Met-HD/ 2015-16/109

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Pre Submission Seminar Certificate

A Pre Submission Ph.D. Seminar of **M. Raviathul Basariya S/o Mr. A. Mohamed Ishaq** bearing roll no. **09607EN004 (Enrollment No.-318845)** was conducted successfully on 15.05.2015 at 03.00 PM by the Departmental Research Committee under the Chairmanship of thesis supervisor Prof. N. K. Mukhopadhyay Department of Metallurgical Engineering, I.I.T., B.H.U. **M. Raviathul Basariya** may be allowed to submit the Ph.D. Thesis entitled "**Synthesis and Characterization of Al-based Nanocrystalline and Nanocomposite Alloys**".

*R.K. Mandal*  
*16/5/2015*

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