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It is certified that the work contained in the thesis titled *"Magnetic and Transport Properties of Spin Modulated Bulk and Heterostructured Quantum Materials"* by *Labanya Ghosh* has been carried out under my supervision and that this work has not been submitted elsewhere for a degree.

It is further certified that the student has fulfilled all the requirements of comprehensive examination, candidacy and SOTA for the award of Ph.D. Degree.

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DECLARATION BY THE CANDIDATE

I, *"Labanya Ghosh"*, certify that the work embodied in this thesis is my own bonafide work and carried out by me under the supervision of *"Prof. Sandip Chatterjee"* from *"December 2017"* to *"December 2022"*, at the *"Department of Physics"*, 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.

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Labanya Ghosh

Dedicated to my beloved
Ma & Baba

"When you want something, you've never had, you have to do something you've never done."

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