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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.

Signature:

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DECLARATION BY THE CANDIDATE

I, "*Ajeet Kumar Vishwakarma*", certify that the work embodied in this thesis is my own bona fide work and carried out by me under the supervision of "*Prof. Rajendra Prasad*" from "*July 2014*" to "*July 2019*", 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 wilfully 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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It is certified that the above statement made by the student is correct to the best of my/our knowledge.

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