**Declaration**

I, hereby, declare that this thesis is the result of my own research work which has been carried out under the joint supervision of Prof. (Mrs) Pranayee Datta, Head, Department of Electronics Science, and Prof. Kanak Ch. Sarma, Head, Department of Instrumentation and University Science Instrumentation Center (USIC), Gauhati University. The results quoted from other workers have properly been referred to. I would like to declare that this thesis, as a whole or any part thereof, has not been submitted for the award of any research degree to this University or any other university/institution.

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