

UNDERTAKING

I, Soni Singh, certify that the work embodied in this Ph.D. thesis is my bonafide work carried out by me under the supervision of Prof. S. P. Singh for a period from September 2011 to November 2016 in the Department of Electronics Engineering, Indian Institute of Technology (Banaras Hindu University), Varanasi. The matter embodied in this Ph.D. thesis has not been submitted for the award of any other degree/diploma.

(Soni Singh)