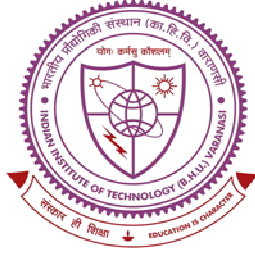


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I, Sunny, certify that the work embodied in this Ph.D. thesis entitled “**Classification and Quantification of Individual/Mixture of Gases/Odors with Soft Computational Techniques Using SnO₂ Based Thick Film Sensor Array**” is my own bonafide work carried out by me under the supervision of **Prof. V. N. Mishra** and co-supervision of **Prof. R. R. Das**, for a period of three years and six months from 06 September, 2011 to 02 March, 2015 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.

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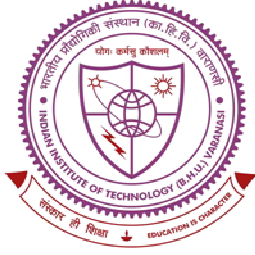
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Ph.D. PRE-SUBMISSION SEMINAR CERTIFICATE

This is to certify that **Mr. Sunny**, Ph.D. Scholar, Department of Electronics Engineering, Indian Institute of Technology (Banaras Hindu University), Varanasi has delivered his Ph.D. Pre-Submission Seminar on his Ph.D. topic "**Classification and Quantification of Individual/Mixture of Gases/Odors With Soft Computational Techniques Using SnO₂ Based Thick Film Sensor Array**", on 18th October, 2014 at 11:00 A.M. in the Committee Room of the Department as per the satisfaction of RPC and DRC/DPGC members.

(Prof. V. N. Mishra)
Supervisor

Convener of DPGC

Head of the Department

Signature of RPC Members:

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