

## CERTIFICATE

This is to certify that the research work presented in this thesis entitle **“Studies on structure, microstructure, mechanical, optical and transport properties of sub-stoichiometric and Nb-substituted nanostructured Titanium Nitride thin films”** for the award of **DOCTOR OF PHILOSOPHY** is an original work carried out by **Mr. K. Vasu** under my supervision at school of Physics, University of Hyderabad, Hyderabad. This thesis work has not been submitted to this or any other university partially or fully for the award of any degree or diploma.

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