Certificate

This is to certify that the thesis titled *Probing dense matter equation of state in light of neutron star observable constraints*, submitted by *Vivek Baruah Thapa (P18PH007)* to the Indian Institute of Technology Jodhpur for the award of the degree of *Doctor of Philosophy*, is a bonafide record of the research work done by him under my supervision. To the best of my knowledge, the contents of this report, in full or in parts, have not been submitted to any other Institute or University for the award of any degree or diploma.

Monika Sinha.

Dr. Monika Sinha Ph.D.Thesis Supervisor

Declaration

I hereby declare that the work presented in this thesis entitled *Probing dense matter* equation of state in light of neutron star observable constraints submitted to the Indian Institute of Technology Jodhpur in partial fulfillment of the requirements for the award of the degree of Doctor of Philosophy, is a bonafide record of the research work carried out under the supervision of Dr. Monika Sinha. The contents of this thesis in full or in parts, have not been submitted to, and will not be submitted by me to, any other Institute or University in India or abroad for the award of any degree or diploma.

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Vivek Baruah Thapa

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- 4. Vivek Baruah Thapa and Monika Sinha. "Influence of nuclear symmetry energy on compact stars with Δ -admixed hypernuclear matter". *Physical Review C*, 105(1), 015802, January 2022.
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