# CANDIDATE'S DECLARATION

I, **Prasanta Das** hereby certify that the work which is being presented in the thesis entitled " POLYTROPIC GAS DARK ENERGY MODELS IN COSMOLOGY" in partial fulfillment of requirements for the award of the Degree of Doctor of Philosophy in Mathematics and submitted to Bodoland University, Kokrajhar, Assam, India, is an authentic record of my own research work carried out during the period from April 2016 to October, 2020 in the Department of Mathematical Sciences, Bodoland University, Kokrajhar, Assam, under the supervision and guidance of **Prof. KangujamPriyokumar Singh**, Professor, Department of Mathematical Sciences, Bodoland University, Kokrajhar.

I further certify that, I have not willfully lifted up some others work, para, text, data and results etc. which are reported in the journals, books, magazines reports, dissertation, thesis etc. which are available on web-sites. Also, I am not claiming the works of other as my own work in this Ph.D thesis.I have acknowledged and referred to all researchers wherever their works have been cited in the text or in any part of the thesis.

The work reported in the thesis is original and has not been submitted in any other university or institute for the award of any degree or diploma.

*Date:*                                                  ***Signature of Candidate***

*Prasanta das*

(PRASANTA DAS)

---

## CERTIFICATE FROM THE SUPERVISOR

This is to certify that the above statement made by the candidate is correct to the best of my knowledge,

*Dr.K.Priyokumar Singh.*

(Dr. KangujamPriyokumar Singh)

Date:                                                    Professor

Place:                                         Department of Mathematical Sciences

Bodoland University, Kokrajhar

Assam, India.