



UNDER GRADUATE & POST GRADUATE DEPARTMENT OF BOTANY  
**DARJEELING GOVERNMENT COLLEGE**

DARJEELING-734101, WEST BENGAL, INDIA

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Ref. No.....

Date...03.06.2015

Certified that the thesis entitled "Studies on Physiology and Biochemistry of *Swertia chirayita* (Roxb.) Karsten in Darjeeling Hills: Influence of Plant growth substances on growth, metabolism and yield" submitted to the University of North Bengal, Siliguri, West Bengal for award of degree of Doctor of Philosophy in Botany, embodies original research work carried out by Miss Sabina Pradhan, M.Sc under our joint supervision. This work has not been submitted in part or in full for this or any other degree before.

Miss Pradhan has followed the rules and regulations as laid down by the University of North Bengal for the fulfillment for requirement for the award of the degree of Doctor of Philosophy in Botany. The results incorporated in this thesis have not been submitted for any other degree.

*Prasanna Lama*

03.06.2015.

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# UNIVERSITY OF NORTH BENGAL

DRS DEPARTMENT OF BOTANY (UGC-SAP & DST-FIST assisted)

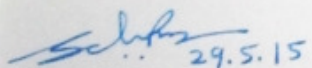
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Certified that the thesis entitled "**Studies on Physiology and Biochemistry of *Swertia chirayita* (Roxb.) Karsten in Darjeeling Hills: Influence of Plant growth substances on growth, metabolism and yield**" submitted to the University of North Bengal, Siliguri, West Bengal for the award of degree of Doctor of Philosophy in Science (Botany), embodies original research work carried out by **Miss Sabina Pradhan, M.Sc** under our joint supervision (Dr. Projjwal Chandra Lama, WBES, DGC and Dr. Subhas Chandra Roy, Ex-WBES, NBU). This work has not been submitted in part or in full for any other degree before.

Miss Pradhan has followed the New rules and regulations (Course work) as laid down by the University of North Bengal for the fulfillment for requirement for the award of the degree of Doctor of Philosophy in Science (Botany).

  
29.5.15

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