## DECLARATION

I certify that

a. The work contained in the thesis is original and has been done by myself under the supervision of Prof. Bikas Ranjan Pati (Retd) and Dr. Pradeep Kumar Das Mohapatra.

b. The work has not been submitted to any other institute for any degree or diploma.

c. I have followed the guidelines provided by the institute in writing the thesis.

d. I have confirmed to the norms and guidelines given in the Ethical Code of Conduct of the institute.

e. Whenever I have used materials (data, theoretical analysis, and text) from other sources, I have given due credit to them by citing them in the text of the thesis and giving their details in the references.

f. Whenever I have quoted written materials from other sources, I have put them under quotation marks and given due credit to the sources by citing them and giving required details in the references.

g. I have incorporated all the necessary corrections in this revised thesis suggested by the Adjudicator.

Riddha Uukherjel.
Riddha Mukherjee