#### CERTIFICATE

This is to certify that this dissertation entitled as "Studies on trace metals (Fe, Mn, Pb, Zn, Cu & Co) in surface sediments of Zuari Estuary, Goa" is a bonafide and an authentic record of the research carried out by Ms. Kirti Dharmendra Ingale, Student of M.Sc. Marine Sciences, under my supervision and guidance at the School of Earth, Ocean & Atmospheric Sciences, Goa University, Goa, in partial fulfilment of the requirement of M.Sc. Marine Science Degree of the University and that no part has been submitted before for any other degree or diploma in any other University.

Date: 14/08/2020

vishnu Murty Matta
Prof. Vishnu Murty Matta
Research Guide
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SEOAS

# STUDIES ON TRACE METALS (Fe, Mn, Pb, Zn, Cu & Co) IN SURFACE SEDIMENTS OF ZUARI ESTUARY



Dissertation

Submitted to

# **GOA UNIVERISTY**

IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF

### MASTER OF SCIENCE

IN

#### MARINE SCIENCES

BY

## KIRTI DHARMENDRA INGALE

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