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CERTIFICATE OF THE PRINCIPAL SUPERVISOR

This is to certify that the thesis entitled "*Gadolinium oxide and oxyfluoride nanosystems: relevant studies as regards optical, rheological and biophysical applications*" submitted to the School of Sciences, Tezpur University in partial fulfillment for the award of the degree of Doctor of Philosophy in Physics, is a record of research work carried out by **Mr. Samiran Hazarika** under my supervision and guidance.

All help received by him from various sources have been duly acknowledged. No part of this thesis has been submitted elsewhere for award of any other degree.

Date:
Place:

(D. Mohanta)
Principal Supervisor



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CERTIFICATE OF THE EXTERNAL EXAMINER AND ODEC

This is to certify that the thesis entitled “*Gadolinium oxide and oxyfluoride nanosystems: relevant studies as regards optical, rheological and biophysical applications*” submitted by Mr. Samiran Hazarika to Tezpur University in the Department of Physics under the school of Sciences in partial fulfillment of the requirement for the award of the degree of Doctor of Philosophy in Physics has been examined by us on _____ and found to be satisfactory.

Principal Supervisor

External Examiner

(D. Mohanta)

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Date: