## Certificate

This is to certify that the thesis entitled "Abrupt Precipitation Changes in the Northeast and Northwest Himalaya during the last Millennium using Proxy Records from Lake and Cave Deposits" submitted by SOM DUTT (SAP ID 500024826) to University of Petroleum and Energy Studies (UPES), Bidoli, Dehradun for the award of the degree of Doctor of Philosophy is a bona fide record of the research work carried out by him under our guidance and supervision. The content of the thesis, in full or parts have not been submitted to any other Institute or University for the award of any other degree or diploma.

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