# *Certificate*

This is to certify that the thesis entitled "**A UNIFICATION OF GENERALIZED MITTAG-LEFFLER FUNCTIONS, FAMILY OF BESSEL FUNCTION AND THEIR $q$-ANALOGUES**" submitted for the award of Ph. D. Degree in Mathematics by **_Ms. B. V. Nathwani_** incorporates the original research work carried out by her under my guidance and no part of this work has been previously submitted by her to any other University or Institution for the same or any other degree.

She has put in research for the requisite number of terms as required by the University.

<div align="right">

*Dr. B. I. Dave*
**(Guide)**
Associate Professor
Department of Mathematics
Faculty of Science
The M. S. University of Baroda
Vadodara-390-002

</div>

Forwarded through:

| **Head** | **Dean** |
|---|---|
| Department of Mathematics | Faculty of science |

Vadodara,
September 2016

# *Certificate*

This is to inform to all concerned that the following publications have arisen out of the research work carried out by my Ph. D. student **Ms. B. V. Nathwani** who wishes to submit the thesis entitled "**A UNIFICATION OF GENERALIZED MITTAG-LEFFLER FUNCTIONS, FAMILY OF BESSEL FUNCTION AND THEIR $q$-ANALOGUES**" to the Department of Mathematics, Faculty of Science, The Maharaja Sayajirao University of Baroda, Vadodara for the award of Ph. D. degree in Mathematics.

1. Prajapati, J., Dave, B. and **Nathwani, B.**, *On a unification of generalized Mittag-Leffler Function and family of Bessel Functions*, Advances in Pure Mathematics **3**(2013), 127–137.

2. Prajapati, J. and **Nathwani, B.**, *Recurrence relation of a unified generalized Mittag-Leffler-Function*, Palestine Journal of Mathematics **3**(1)(2014), 94–98.
   MR♯ 3109941

3. Prajapati, J. and **Nathwani, B.**, *Fractional calculus of a unified Mittag-Leffler function*, Ukrainian Mathematical Journal **66**(2015), 1267–1280.
   MR♯ 3334434

4. **Nathwani, B.** and Dave, B., *Generalized Mittag-Leffler function and its properties*, The Mathematics Student, (to appear).

*Dr. Jyotindra C. Prajapati,*
**(Co-Author)**
Principal,
Faculty of Science,
Marwadi University,
Rajkot-Morbi highway,
Rajkot-360003, Gujarat, INDIA

*Dr. B. I. Dave*
**(Guide)**
Associate Professor
Department of Mathematics
Faculty of Science
The M. S. University of Baroda
Vadodara-390-002