Certificate

This is to certify that the thesis entitled **"STUDY OF MHD FLOW WITH HEAT AND MASS TRANSFER"** submitted for the award of Ph. D. Degree in Mathematics by **Mr. Harshad R. Patel** (Reg. No: FOS/1937, Date: 21/04/2015), incorporates the original research work carried out by him under my guidance and no part of this work has been previously submitted by him to any other University or Institution for the same or any other degree.

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

Dr. H. R. Kataria

(Guide)

Professor and Head,

Department of Mathematics

Faculty of Science,

The M. S. University of Baroda,

Vadodara - 390002

Forwarded through:

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

Vadodara,

September 2017

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 Mr. Harshad. R. Patel who wishes to submit the thesis entitled "**STUDY OF MHD FLOW WITH HEAT AND MASS TRANSFER**" 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. H. R. Kataria, H. R. Patel and R. P. Singh, Effect of magnetic field on unsteady natural convective flow of a micropolar fluid between two vertical walls, ***Ain Shams Engineering Journal*** (2017) 8, 87–102, ISSN: 2090-4479. (**Elsevier**), UGC Journal List Number: 3149.
2. H. R. Kataria and H. R. Patel, Heat and mass transfer in MHD Casson fluid flow past over an oscillating vertical plate embedded in porous medium with ramped wall temperature, ***Propulsion and Power Research***, Accept. ISSN: 2212-540X, (**Elsevier**), UGC Journal List Number: 48294
3. H. R. Kataria and H. R. Patel, Heat and Mass Transfer in MHD Second Grade Fluid Flow with Ramped Wall Temperature through Porous Medium, ***Mathematics Today***, 32 (2016) 67-83, ISSN 0976-3228, UGC Journal List Number: 47789
4. H. R. Kataria and H. R. Patel, Radiation and chemical reaction effects on MHD Casson fluid flow past an oscillating vertical plate embedded in porous medium, ***Alexandria Engineering Journal,*** 55 (2016) 583-595, ISSN: 1110-0168, (**Elsevier**), UGC Journal List Number: 12012
5. H. R. Kataria and H. R. Patel, Effect of thermal radiation and chemical reaction on MHD Casson fluid flow past over an exponentially accelerated vertical plate embedded in a porous medium, ***Proceeding of International Conference on Futuristic Trends in Engineering, Science, Pharmacy and Management***, ***A D Publication***, ID: ICFTESPM2016CP150257, 1 (2016) 112-131, ISBN: 978-81-933386-0-5
6. H. R. Kataria and H. R. Patel, Effects of chemical reaction and heat generation/absorption on MHD Casson fluid flow over an exponentially accelerated vertical plate embedded in porous medium with ramped wall temperature and ramped surface concentration,

Propulsion and Power Research, Accept. ISSN: 2212-540X, (**Elsevier**), UGC Journal List Number: 48294.

7. H. R. Kataria and H. R. Patel, Soret and heat generation effects on MHD casson fluid flow past an oscillating vertical plate embedded through porous medium, ***Alexandria Engineering Journal,*** 55 (2016) 2125–2137, ISSN: 1110-0168, (**Elsevier**), UGC Journal List Number: 12012
8. H. R. Kataria and H. R. Patel, Effect of thermo-diffusion and parabolic motion on MHD Second grade fluid flow with ramped wall temperature and ramped surface concentration, ***Alexandria Engineering Journal,*** 10.1016/j.aej.2016.11.014, ISSN: 1110-0168, (**Elsevier**), UGC Journal List Number: 12012.

Dr. H. R. Kataria

(Guide)

Professor and Head,

Department of Mathematics,

Faculty of Science,

The M. S. University of Baroda,

Vadodara-390002