DECLARATION

I, SHAHIR VK (RP12ME001) hereby declare that the thesis, entitled “EXPERIMENTAL INVESTIGATION ON PERFORMANCE AND EMISSION CHARACTERISTICS OF A COMMON RAIL DIRECT INJECTION ENGINE USING BIODIESEL BLEND”, submitted to the Karunya Institute of Technology and Science, in partial fulfillment of the requirements for the award of the Degree of Doctor of Philosophy in Mechanical Engineering is a record of original and independent research work done by me during the period 2012–2018, under the Supervision and guidance of Dr. Jawahar CP, Associate Professor, Department of Mechanical Engineering, Karunya Institute of Technology and Science and under the Joint- Supervision of, Dr. Suresh P R, Associate Professor, Department of Mechanical Engineering, NSS Engineering College, Palakkad. The work contained in this thesis has not been previously submitted to meet the requirements for a degree or diploma at this or any other higher education institution.

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