



## CERTIFICATE

Date: 8<sup>th</sup> August 2020

This is to certify that the project report entitled "**Joint Resource allocation for OFDM based Cognitive two way Multiple AF Relay networks with Imperfect Spectrum**", that is being submitted by **Palle Pravalika** with **Roll no. 18251D6511** in partial fulfillment of the award of M. Tech in Wireless and Mobile Communications, to the Jawaharlal Nehru Technological University, Hyderabad is a record of bonafide work carried out by her under our guidance and supervision in the academic year 2019-2020.

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