## G. NARAYANAMMA INSTITUTE OF TECHNOLOGY & SCIENCE



(AUTONOMOUS)

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## 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 withImperfect 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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